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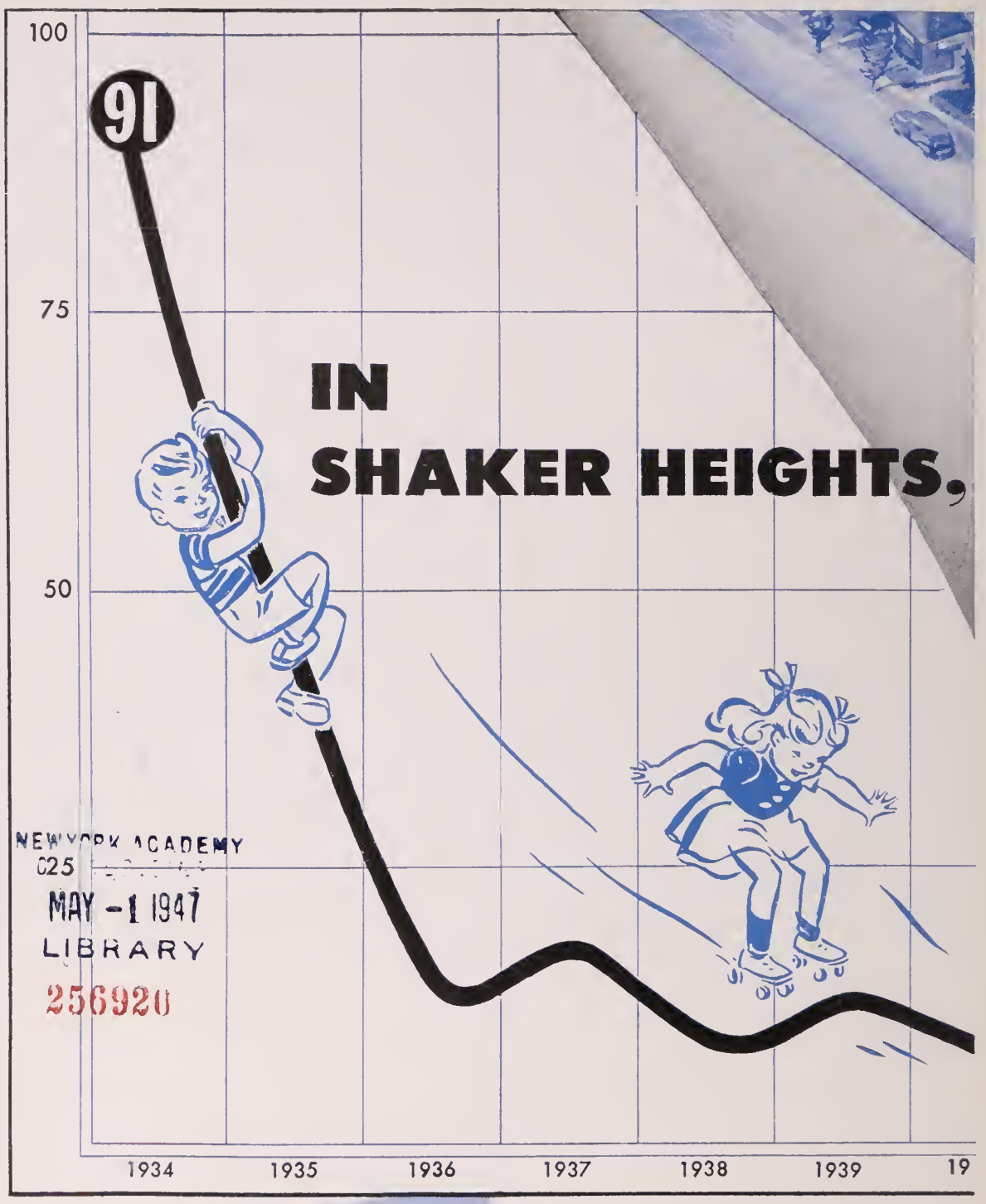
Best Wishes
for the
New Year

January 1946



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Postwar Plans for Returning Medical Veterans

IN May, 1945, the Committee on Clinical and Medical Education of the Medical Society of Virginia met in Richmond to appraise the problems that would face the Medical Officers in the Armed Services at the time of their release from active duty. It was agreed that there were insufficient data available at that time for a rational approach to the problem and it was suggested that a Veterans Representative be appointed by the Committee to ascertain by questionnaire the prospective needs and desires of the returning medical officers. Doctor Andrew D. Hart (Lt. Col., M.C., A.U.S., retired) was elected Veterans Representative and the Medical Society of Virginia agreed to pay the expenses necessary for such an investigation.

Doctor Hart organized an office and mailed more than 1,000 questionnaires to Virginia doctors in the Services in June, 1945. The list of names was furnished by Selective Service but unfortunately the addresses were inadequate. In addition, at the time of mailing there were numerous changes of addresses due to redeployment following V-E day. In spite of these difficulties, however, 270 replies were received and analyzed. There were 214 officers who expressed the desire for further medical training before entering practice on their return to civilian life. So it was obvious even before V-J day that the readjustment of Virginia doctors to civilian status would constitute a large problem.

These questionnaires were divided into those who had been in practice prior to service and those whose formal training had been interrupted by the war. The first group numbered 161 persons, with an average age of forty years. The majority of these wanted some sort of refresher course of variable content and length. The second group numbered 109 individuals, with an average age of thirty years. Most of these wished one to several years of hospital training leading to residencies. Twenty-one replies expressed a desire for financial assistance through loans. It is hoped that a loan fund can be arranged later through the Medical Society of Virginia.

In addition, the Office of the Veterans Representative gathered information on many topics of interest to the returning Medical Veterans and has placed all its files at the disposal of the representatives of the two State medical schools who will henceforth undertake the program. Doctor Staige D. Blackford (Col. M.C., A.U.S., inactive), Box 1725, University Post Office, Charlottesville, Virginia, has been placed in charge of the Postwar Program for returning Medical Veterans at the University of Virginia, and Doctor James P. Baker (Lt. Col., M.C.,, A.U.S., inactive), Medical College of Virginia Hospital, Richmond 19, Virginia, is in charge for the Medical College of Virginia.

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RESIDENCIES, INTERNSHIPS, AND FELLOWSHIPS

The program at each of these institutions is essentially similar. Both hospitals have increased considerably the house staff positions available, and Veterans are given first priority on all assistant resident and resident positions. Appointments for July, 1946, are nearly completed, but those interested in the few remaining or in appointments beginning July 1, 1947, should make application directly to the Chief of the particular Service at the University of Virginia Hospital or at the Medical College of Virginia Hospitals. In some instances special internships of less than a year's duration can be arranged by the heads of the various departments after personal conversation. Applications for clinical fellowships should also be made to Department heads. Instruction in specialized fields can be arranged at times in preclinical as well as clinical subjects, but this is best accomplished by personal interview.

EXTERNE OBSERVERS

Medical Veterans furnishing their own maintenance in order to observe clinical work in the hospital will be welcomed by both institutions. The periods of observation may be as short or as long as the individual desires. Such externes may attend staff rounds, special clinics, outpatient clinics, operations, seminars, conferences, etc., and the library facilities will be at their disposal. Each medical school has a special file outlining what is available in the various clinical and preclinical departments for these observers, and a satisfactory daily program can be mapped out in advance by the observer to fill his particular requirements. For those who have completed their house staff training, this would seem to offer an excellent way of refreshing their memories on what they have forgotten as well as allowing them to inform themselves of what is new in the various fields of medicine, particularly if they know specifically what they want in advance.

REFRESHER COURSES

The Department of Medicine of the University of Virginia and the School of Medicine of the Medical College of Virginia have arranged a series of two-week refresher courses in General Medicine. The first of these was given at the University of Virginia in Charlottesville December 3-15, 1945, inclusive, and was attended by 28 veterans and 5 other physicians. The next course will be held in March, 1946, in Richmond by the Medical College of Virginia, with another in Charlottesville in June, 1946, and the final course in Richmond in September, 1946. By having a refresher course available in the State every 3 months, all Veterans with as much as 90 days' terminal leave will have the opportunity to avail themselves of one course before they have to return to practice. These courses consist of 36 lectures, 20 clinics (choice of 2 each day), and 40 ward rounds (choice of 4 each day) during the day by the staffs of the respective institutions. The 10 evening sessions are held by invited guests. The charge for each course is $40 and the attendance is limited to 50 registrants. Priority is given to Veterans, but other physicians may enroll provided the limit is not exceeded. Doctors Blackford and Baker are in charge of the respective courses, and those interested should communicate with them.

It is hoped that a 3-month course in the basic sciences to prepare candidates for specialty certification examinations can be offered in the spring of 1946 if there is sufficient demand.

INFORMATION

An office is established at the University of Virginia Hospital under the supervision of Doctor Blackford and another at the Medical College of Virginia Hospital under the supervision of Doctor Baker to provide information and advice for returning physicians. In each office there are maintained files containing the following materials largely gathered by Doctor Hart:

a. All internships and residencies available in the 48 hospitals in Virginia replying to the 100 questionnaires mailed to all hospitals in the State. There are 122 vacancies on record for internships, residencies, and staff positions. Many of these provide salaries in addition to maintenance.

b. The list of approved residencies in the U. S. in the various specialties as issued by the JAMA in a special supplement dated October 1, 1945.

c. All opportunities for private and industrial practice in Virginia as compiled from questionnaires sent to the component societies of the Medical Society of Virginia and to all the larger industrial concerns within the State. In addition, a record of all other opportunities for practice that can be accumulated from personal contacts is maintained. These offices would like to be advised of any further openings that might become available.

d. All literature that can be obtained on all the graduate medical courses and fellowships offered by the leading medical institutions of the U. S.

e. All requirements for specialty certification by the various Specialty Boards. A supply of booklets on medical records in the service (to be filled out by the applicants' superior officers) is maintained.

f. Literature on the G.I. Bill of Rights and other data of interest to Veterans.

These files are open to all doctors who visit either office. As far as practicable, advice will be given by correspondence but it is believed that a personal interview by appointment with either Doctor Blackford or Doctor Baker will prove more satisfactory to veterans needing information or other assistance.

Floral Eponym (34)

BOERHAAVIA

BOERHAAVE, HERMANN, 1668-1738.

S. F. Blake, Senior Botanist of the U. S. Department of Agriculture, has been good enough to send the following note: "Boerhaavia is a tropical and subtropical genus of low weedy herbs containing about 50 species, found in both the Old and New Worlds. It is a member of the four-o'clock family (Nuctaginaceae). The plants are usually much branched, with opposite, usually ovate leaves, and tiny apetalous flowers. The calyx is often pink or purplish and the small fruit is club-shaped or ovoid, ribbed, and often glandular. The genus is named for Herman Boerhaave."

Boerhaave was professor of Botany at the University of Leyden and a celebrated physician. He is especially well known through his pupils, Haller, Gaub, Cullen, Pringle, van Swieten and de Haen. He is credited with being the first to describe the rupture of the aesophagus and to establish the site of pleurisy exclusively in the pleura and to prove that smallpox is spread exclusively by contagion. He used the Fahrenheit thermometer in his clinic.

was somewhat of a puzzle as how one should approach her.

Her past history was without especial incident and she had never undergone any sort of operation. She had been under medical care for several years for nervousness attributed to the change of life. She was recently seen by a new physician who sent her to me.

Her chief complaint was a feeling of prolapse and bearing down and pressure. Added to this was bleeding. For about two months she had had some bleeding almost daily. She was still having regular menstrual periods every 28 days which only lasted three or four days. Since her hemoglobin was 90% on admission her bleeding must have been trivial. Her physician had correctly diagnosed her case, and after thorough corroboration I decided to operate.

Examination disclosed a large, hard tumor of a somewhat dumbbell shape, presenting at the vulva and completely filling the vagina to which it clung so tightly that it could not be rotated or pulled down as in delivery. It was so moulded to the vaginal cavity and filled it so completely that one could not reach its apex nor feel its attachment to the cervix or uterus. It was then impossible to remove it intact from below, and we feared to bisect it lest we get into bleeding which we might be unable to control.

So we decided to approach it by a combined attack from above and below. I can not give a better description than to quote verbatim the operation sheet dictated just after the operation was completed.

We first put the patient up in stirrups to see if delivery of the tumor, which was about 10 inches in length and some 5 to 6 inches in diameter and shaped like a dumbbell, could be removed from below. The vagina was quite small though the tumor presented at the vulva. The attachment to the uterus could not be reached with one's fingers. We irrigated out a considerable amount of old blood and then went in through a low right rectus incision from above.

On opening the abdomen it was seen that the uterus was quite small and contained several small fibroid nodules on its surface. The ovaries were small but there was a parovarian cyst the size of a small English walnut attached to each of them. The uterus itself was quite normal in size, being small, hard, and atrophic. It appeared quite normal down to the utero-cervical junction. From here the appearance was a most strange and unusual one. There was a large globular tumor filling the whole pelvis in every direction. The bladder was pushed over to the left.

We first tied off the broad and round ligaments on each side and stripped back the tissues toward the bladder. We then opened the cervix which was enormously expanded by the polyp-like tumor just as though we were going to do a complete hysterectomy, only we were going into the expanded cervix instead of directly into the vagina. We mopped out the old blood and kept the field as clean as possible with suction. When a finger was passed around the pedicle of the tumor it was seen that the pedicle arose from its posterior surface. We continued our circular incision cutting the cervix above the attachment so that it would remain fastened to the tumor. We then got Dr. Barnes to pull on the tumor from below as we pressed down on the detached uterus and tumor from above.

Now the dumbbell shape of the tumor made delivery extremely difficult, for the upper portion of the dumbbell was grasped very tightly by the expanded cervix. Dr. Barnes had to strip away many pieces before the whole mass could be delivered. In other words, our accoucheur had to practice morcellement. We felt that this delivery from below was extremely important because had we drawn the mass up through the abdomen we would have had to make a large incision in the posterior expanded cervix and posterior wall of the vagina, and in addition to this we would inevitably have spilled much old blood and mucus into the pelvic cavity.

After the delivery we put in one or more sponges and had Dr. Barnes draw them through from below to dry out the vagina and cleanse it as much as possible. We then sprinkled 60 grains of crystalline sulfanilamide into the vagina and closed the dilated cervix just as one would close the vagina after a complete hysterectomy. It was noted that as the stitches were put in, the cervix began to contract and when the peritoneum was whipped over it we had the appearance as a rather high supravaginal hysterectomy.

A post-cecal adherent appendix was removed. More sulfanilamide crystals were scattered over the cervical wound and the abdomen was then closed without drainage and in the usual way.

The procedure required about one and one-half hours but the patient left the table in excellent condition.

She was recently examined and one got the impression that an ordinary hysterectomy had been done. She is entirely well, and is doubtless more comfortable as she sits at her desk teaching her little children.

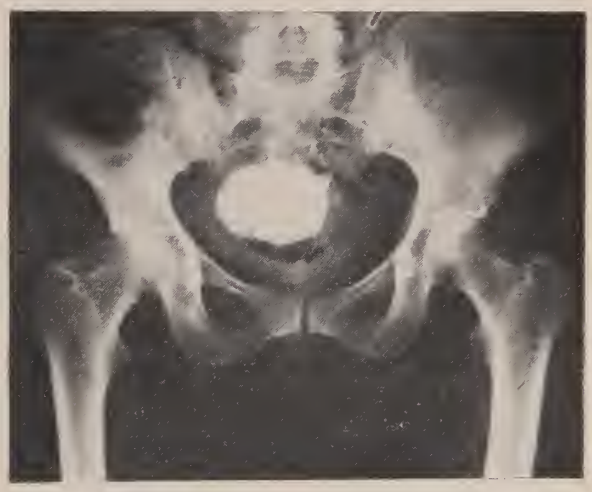
Women do not develop tumors as large as a cantaloupe in a matter of months. It is remarkable what we can endure and adjust ourselves to, provided it happens to us slowly. In spite of this large mass crowding her pelvic organs all out of normal relations she was able to carry on.

You will note two things of great significance in her history: First, the physician last and recently consulted, had examined her and discovered her true condition, and brought her promptly for relief. Second, she had been treated for the preceding several years for symptoms attributed to the menopause.

I cannot help thinking of that terrible indictment of our profession so simply worded by the disciple Mark a little more than nineteen hundred years ago. It was concerning one, Lydia, who was for many years afflicted with an issue of blood. She had suffered many things at the hands of many physicians, had expended all of her money, and was no better but worse. Probably not one of them had made a real examination. May be with the means at hand they could not have done very much if they had. Then it took a miracle by Christ himself to make her whole again.

"An issue of blood" they called it. Have we done nothing in the ensuing nineteen hundred years except to call it the change of life, the menopause, the climateric? If we just give medicines or "shots", as hypodermics are familiarly called, without making an examination to find out what she really has, are we any better off than those doctors who treated Lydia? Isn't it we, rather than they, who deserve that blistering indictment that the disciple gave our profession? "Suffered many things at the hands of many physicians and was no better but worse."

Case IV.—The last case was a mere little wisp of a woman. She was 62 but looked older. She was a spinster who looked like a school teacher but did clerical work. She weighed just a little over one hundred pounds, and her back was bent over forward and twisted just a little to one side. She was quiet, intelligent, and kindly co-operative. She first came to see me about two years ago, having discovered a lump about the nipple of one of her rather inadequate little breasts. I removed it radically which was not much of a job. There were no involved axillary nodes but as usual she was also



Case IV shows calcified tumor of uterus discovered while looking for bony metastasis.

given post-operative x-ray to guard against recurrence. She came to see me for a check-up about every few months. She had made a good recovery and her scar was smooth and slipped easily over her chest.

About two weeks ago she came complaining of pains in her left hip and thigh and radiating down her leg. "Ah," said I to myself in my unwisdom, "Your cancer has jumped into the bones of your spine and pelvis, and may be your femur will look like the cut worms have been after it."

I wish some one would tell me why this happens. Why should a breast cancer attack the long bones such as the femur or the pelvic bones and cause them to fracture on some slight exertion or accident? Why are the bodies of the vertebrae eaten away and tumbled in, just as we see when the tubercle bacillus is making a hunchback of some little child. There are a lot of things we do not know much about.

Now you will see what the x-ray showed. Clean bones, no metastases at all. But there in the pelvis is a fibroid tumor of the uterus about the size of a billiard ball and completely calcified. It stands out like a stone or a piece of ivory. Now this little woman has only had these pains about three weeks.

She must have had the tumor for years. Tumors do not calcify over night and may be something else is giving her the neuritis or pain. She is not a good patient for major surgery and one should be very certain that an operation is going to cure or help her greatly before undertaking it.

I watched her move down the hall, her back bent forward and a little to one side. She is a good little woman and I want very earnestly to help her. And if I can not help her, I certainly have no wish to add to her difficulties. I will watch her for a while and treat her as a case of neuritis until we can be sure it is or is not the tumor that causes her pain.

Sometimes I think we get in a hurry when there is no hurry. Sometimes I think that may be we are getting too far away from what should be the heart and soul of every medical school, and in the hearts and minds and souls of every one of its teachers, the Humanities of Medicine.

McGuire Clinic.

'YGIENIC 'ABITS

We were fairly clean and decent before the war arose,
For 'ygiene was our hobby, as everybody knows;
We worshipped sanitation, and every cross-roads school
Distributed the tenets of the 'ygienic rule.
We had 'ygienic 'abits,
Fine 'ygienic 'abits,
And we almost lived within the swimming pool.

We brushed our teeth of mornings in happy days gone by,
We cleansed our nose and trimmed our toes and peeled our weather eye;
We laved our persons frequently, with stintless use of soap,
We left no dirt beneath a shirt, and smelled like heliotrope.
We loved 'ygienic 'abits,
Grand 'ygienic 'abits!
And we gave our predilection ample scope.

How changed the pristine purity, how altered those old ways!
For now in dirt we wallow as we cheat the passing days.
Of dental paste we rarely taste, soap slithers in a dream,
And as for baths, we speculate on how hot baths would seem;
For our 'ygienic 'abits,
Awful 'ygienic 'abits!
Are notorious in our present-day régime.

We give ourselves once-overs, our shoes are seldom shined;
Our clothing's minus buttons, to wear and tear inclined.
The erstwhile busy razor-blade has vanished—who knows where?
And we hesitate to expatiate on our whiskers and our hair.
Frightful 'ygienic 'abits!
Un-'ygienic 'abits!
And we've almost ceased to wish to seem to care.

We polish what must meet the eye and leave the rest alone;
We're not so much on spotless skin, but come out strong on bone.
Our diet is but hit or miss, with misses more than hits,
While sirens shriek our slumbers into nervous starts and fits.
These 'ygienic 'abits,
Fearful 'ygienic 'abits,
Are leaving very little of our wits.

However, some bright morning sun will slant a golden path
Where Europe's darkest memories will be drowned within a bath.
I hear the voices calling, "Come, people, start the rub,
This box of soap fulfils your hope, so scrub, scrub, scrub!"
And our 'ygienic 'abits,
Glorious 'ygienic 'abits,
Reborn will rise resplendent from a tub.

10 bis rue Herran, THEODORE C. MERRILL.
Paris, 16e, France.

Written in 1943, during the occupation of Paris by the Germans.

POSTOPERATIVE PNEUMONIA AND ATELECTASIS*

M. L. WHITE, JR., M.D.,
Charlottesville, Virginia.

Pulmonary complications following surgical operations range from fatal pulmonary embolism to simple atelectasis, including sterile infarction, abscess, pneumonitis and pneumonia. There are two main causes for these complications, namely, bronchial obstruction and embolism. The former is by far the most common cause of atelectasis and pneumonia, many cases of which may progress to suppurative pneumonitis, either diffuse or localized in the form of abscess. Since atelectasis and pneumonia are the most common postoperative pulmonary complications, it is pertinent to discuss the relationship between these conditions and obstruction of the bronchi. The present paper is concerned with the mechanism, diagnosis, prevention and treatment of atelectasis and pneumonia resulting from bronchial obstruction.

The incidence of pneumonia and atelectasis following all types of operations was in King's experience[7] from 3.7 per cent to 6.8 per cent in different years, and in Lindskog's series[9] 7.5 per cent. These figures were derived from the personal observations of the two authors in large series of cases, 7,065 and 1,215, respectively, and are, therefore, probably more accurate than the figures derived from a study of hospital charts alone. The pulmonary complications contributed 0.3 per cent to 0.6 per cent to the mortality of King's series, and 1.5 per cent to the mortality of Lindskog's series.

CAUSES OF BRONCHIAL OBSTRUCTION

The major cause of bronchial obstruction is the presence in the bronchi of excess secretions which have not been removed by the cough mechanism. There are three minor possible causes which may occasionally be the only cause of bronchial obstruction, but which far more often increase the degree of obstruction caused by retained secretions. These three are (1) vascular congestion with dilatation of the pulmonary vessels decreasing the lumen of the bronchioles, (2) bronchial spasm and (3) edema of the mucous membrane. Although bronchial spasm has been demonstrated by bronchography after experimental pulmonary embolism and is known to follow massive injury to the chest and intra-abdominal manipulation,[2] much the most important of these three is edema of the mucous membrane. This may be a progressive process beginning in the area of retained secretions.

RESULTS OF BRONCHIAL OBSTRUCTION

When a bronchus is completely obstructed, the first result is the absorption into the pulmonary capillaries of oxygen, carbon dioxide and nitrogen in that order from the pulmonary tree distal to the point of obstruction. This results in an airless segment of lung, the classical condition of atelectasis. If the plug is promptly removed, either by coughing or by some artificial means, the collapsed segment of lung will fill with air and no further pathological change may occur. It must be remembered that the obstructing secretions are rarely sterile. If the plug remains any length of time, therefore, there is increasing danger of infection in the lung distal to the obstruction. The commonest result is an immediate pneumonitis which after aeration of the lung remains as a patchy bronchopneumonia. The pneumonitis may progress to massive necrosis with abscess; or to necrosis in the walls of the smaller bronchi, resulting ultimately in bronchiectasis. Whether these more extreme results of pulmonary infection will occur depends upon the length of time the obstruction remains and the number and virulence of the contaminating organisms.

The sequence of atelectasis and lung infection is the most important factor in the development of postoperative pulmonary complications. The changes caused by atelectasis are promptly reversible if the obstruction is removed early. Such early treatment may completely prevent infection. The earlier the relief the less is the chance of complicating infection. The rationale of prevention and treatment of postoperative pulmonary infections rests, therefore, largely upon the prevention and early treatment of bronchial obstruction.

MECHANISM OF BRONCHIAL OBSTRUCTION BY SECRETIONS

There are two factors in the obstruction of a bronchus by secretions. One of these is the presence of secretion in abnormally large quantities, and the

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second is the failure of the patient to evacuate the material by the normal mechanism. When secretions are present in normal amounts they are removed by the activity of the cilia of the bronchial mucosal cells. These cilia are in constant motion, sweeping secretions upwards toward the pharynx into which

Fig. 1. Equipment necessary for bedside intratracheal aspiration. Instruments are placed on top of portable suction machine. Shown above are: anesthetist's type laryngoscope Flagg), No. 16 urethral catheter, straight stylet (without bulbous tip), Luken's collecting tube, pontocaine atomizer, and rubber tubing with glass connecting tip.

they are discharged for swallowing. Any greater quantity of secretion than normal cannot be handled by this mechanism and the cough mechanism then supplements the overwhelmed ciliary action. Usually cough is adequate to remove even large amounts of secretion. If bronchial obstruction is to occur, there must, therefore, be first excess material, and second an inadequate cough.

There are several sources in surgical patients for excessive secretion in the bronchi. An unusual amount of secretions may be present before the operation from an acute respiratory infection, such as common cold, pharyngitis, tracheobronchitis, influenza or pneumonia; from chronic bronchitis or bronchiectasis; from tuberculous or non-tuberculous parenchymal suppuration; or from bronchial irritation from inhalants such as tobacco smoke.

Secretions may enter the tracheobronchial tree during anesthesia by the aspiration of saliva, nasopharyngeal secretions, or vomitus. Here should be mentioned also the pus from an alveolar abscess or pyorrhea. Oral sepsis is a prominent etiological factor in the more severe pulmonary complications such as necro-suppurative pneumonitis or pulmonary abscess. The severity of these infections is probably due to the great virulence of the mouth organisms, frequently anaerobic.

Preoperative disease of the mouth, pharynx and respiratory tract is associated with a high rate of postoperative respiratory complications. Rovenstine and Taylor[11] found 6 per cent complications overall, but in cases with preoperative pharyngitis the complication rate rose to 10 per cent, with oral sepsis to 11 per cent, with emphysema to 15 per cent, and with non-specific cough to 25 per cent.

Secretions may form in the bronchial tree during and after operation. The anesthetic agent is of particular importance. Ether, an irritant, is much more likely than other agents to cause the mucous membrane to secrete. Inlying nasal tubes necessary

Fig. 2. This illustrates position of patient in bed and optimum positions of operator and assistants. Nurse at end of bed will elevate head of bed after the insertion of the catheter if patient is very dyspneic or apprehensive.

in gastro-intestinal surgery cause excessive secretion in the nasopharynx, and a higher incidence of pulmonary complications.

Poor evacuation of bronchial secretions by cough is due to a number of factors. Within the first postoperative days following an abdominal or thoracic

operation, the incision is always a source of pain with the act of coughing. The bechic blast causes a sharp rise of both intrapleural and intraperitoneal pressures. This results in increased tension on the recently approximated tissues, and produces pain. For his own comfort, therefore, the patient sets up a strong resistance to forceful coughing.

The incidence of complications in upper abdominal operations is approximately twice that in lower abdominal surgery. Lindskog[9] found 20.8 per cent atelectasis, pneumonia or pneumonitis following operations on the stomach and duodenum, 14.9 per cent following biliary tract operations, and only 9.8 per cent and 8.3 per cent following appendicectomies and herniorrhaphies respectively. King[7] reports an even greater discrepancy between upper and lower abdominal operations with 38.3 per cent and 42.3 per cent (different years) pulmonary complications following stomach and duodenum operations, as compared to 4.9 per cent and 7.4 per cent respectively following gynecological laparotomies. The upper abdominal incision is close to the costal level and is affected by costal movements. Likewise, the peritoneum of the diaphragm may receive greater insult from upper abdominal surgery. The increase of pain from the incision and the splinting of the diaphragm both tend to limit cough. Besides certain advantages of exposure the transverse upper abdominal incision is much less painful postoperatively, because with contraction of the abdominal muscles incident to coughing, the incision tends to approximate rather than to separate. There is also less opportunity to injure the intercostal nerves supplying these muscles so that the abdominal splinting necessary for effective coughing is unimpaired. The incidence of pulmonary complications is lower when this incision is used, as compared with that following longitudinal incisions.[6,4]

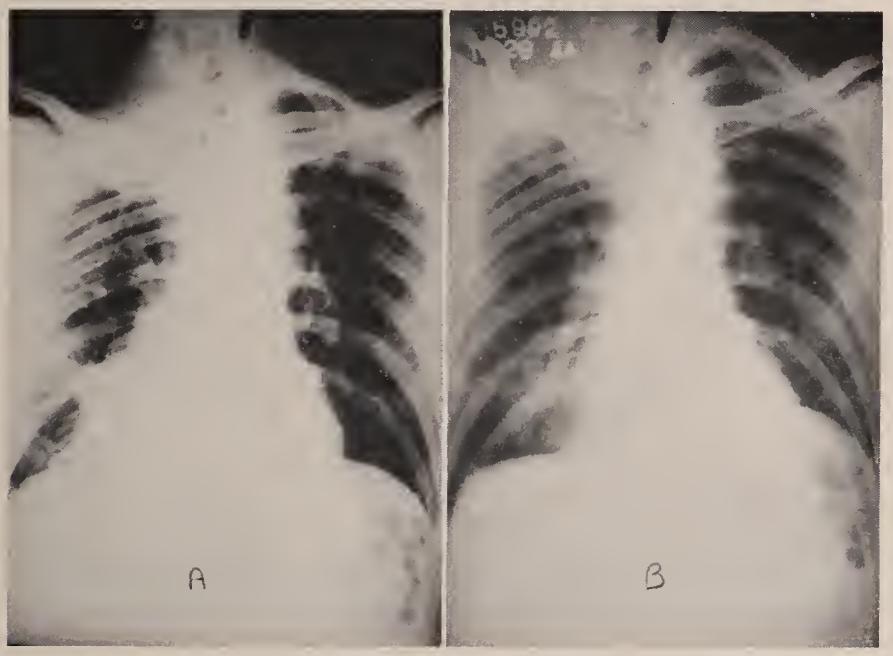

Fig. 3. A 39 year old white male whose temperature rose suddenly to 105 degrees F. on the third postoperative day following subtotal gastrectomy for a gastric ulcer. Physical signs of decreased aeration of right lower lobe. Portable roentgenogram A, taken one hour before intratracheal catheter aspiration, shows atelectasis of right lower lobe. Ten cubic centimeters of thick muco-purulent sputum were aspirated, following which the patient coughed frequently. Roentgenogram B was taken twelve hours after aspiration. The temperature was 99.6 at this time and never went above this thereafter. There is residual patchy pneumonia, for which chemotherapy was indicated.

After most abdominal operations, there is a bilateral rise of the diaphragm with reflex immobility. The lack of full excursion of the diaphragm is due to several factors: peritoneal insult, either simple trauma or trauma and contamination; postoperative abdominal distention; air in the peritoneal cavity; and an increase in incisional discomfort with deep inspiration. With hypoventilation of the bases of the lungs secondary to poor diaphragmatic function, there is little tendency for air to pass distal

to mucous plugs, and hence there is no effective propelling blast of air to expel the mucus. Likewise, with hypoventilation there is interference with the normal variation in size of the bronchi during the respiratory cycle, and also interference with the cilia of the membrane. This adds to the difficulty of dislodging secretions.

Postoperative pneumonia and atelectasis are about two to two and one-half times more frequent in males than in females.[4] This is generally attributed to the fact that females are predominantly costal breathers and males are predominantly diaphragmatic breathers, and that, therefore, postoperative diaphragmatic splinting disrupts the normal respiratory mechanics more in the male than in the female.

Preoperative and postoperative drugs play an important role. The patient usually receives an immediate preoperative dose of either a barbiturate or morphine, or both, and either atropine or ephedrine. Sedatives are also given frequently during the night before an operation. These drugs, particularly if given for several hours before operation, cause a diminution in the sensitivity of the cough reflex, and patients may enter the operating room with an over-night accumulation of bronchial secretions. Long acting barbiturates frequently carry this effect over into the postoperative period. Opiates administered at the first sign of discomfort and at regular intervals thereafter further depress the cough reflex, and thus a patient may lie for two or three days with shallow breathing and minimal response to mucosal reflexes. Atropine and ephedrine serve as valuable drying agents to the mucous membranes and diminish the chances of aspiration of pharyngeal secretions during the operation. On the other hand, these drugs cause the mucus secreted to be tenacious, making evacuation difficult. Such sticky mucus is furthermore much more likely to adhere to the total circumference of a bronchus so that a total occlusion may result more easily.

The effect of the anesthetic agent itself may be of importance. In the first place, a general anesthetic given for relaxation of the musculature, as in the closure of an abdominal wound, will not permit immediate reestablishment of the cough reflex promptly at the close of the operation. It might be expected that a spinal anesthesia would be followed by fewer postoperative complications. This is not true, as shown, for instance, by the figures from the University of Virginia Hospital (1931-1935) which show 4.0 per cent pulmonary complications with general anesthesia and 5.3 per cent with spinal anesthesia.[8] Spinal anesthesia paralyzes lower costal breathing for varying lengths of time, depending on the anesthetic agent and the level of anesthesia.[1]

Postoperative dehydration, although of infrequent occurrence now in modern practice, will cause an increase in the viscosity of bronchial secretions with attendant difficult evacuation.

Certain patients will have difficulty keeping their respiratory passages clear because of general cachexia with poor muscle tone, obesity (with an abnormally high diaphragm) emphysema, the rigid chest of senility, or other conditions which limit the normal range of respiration.

DIAGNOSIS

The frequency of the diagnosis of retained bronchial secretions depends to a great extent on the index of suspicion of the examining physician. One has constantly to look for this complication in order to detect the early cases.

Profuse bronchial secretion, either obvious or elicited by a voluntary cough, is usually the first sign of impending pulmonary complications. This is frequently overlooked until the patient has a sudden rise in temperature, usually occurring from the first to the fifth postoperative day. A sudden fever in the absence of other obvious causes is usually due to atelectasis or pneumonia. Rhonchi or wheezes can be elicited by palpation of the chest during deep breathing or coughing, and by auscultation near the mouth, over the trachea or large bronchi, and over the pulmonary bases. The stethoscope placed over the trachea above the suprasternal notch is especially valuable.[4] This may permit the detection of mucus in the trachea or large bronchi before pulmonary damage is done. The classical physical signs of atelectasis or bronchopneumonia, which need not be detailed here, together with fever, tachycardia, dyspnea, cyanosis and in advanced cases, coma, complete the clinical diagnosis.

X-rays complete the diagnosis. Beside films, which are usually necessary because the patient cannot be moved to the x-ray department, are adequate. These films determine parenchymal involvement and give information as to whether the lesion is primarily an atelectasis or pneumonia, and its

extent and location. Portable films are used routinely on all suspected cases.

PREVENTION

The high incidence of postoperative pulmonary complications can be decreased if certain prophylactic measures are made a part of the surgical routine.

No elective operation should be performed on a patient with an acute upper respiratory infection. Haight[4] advocates waiting at least two or three weeks after the last symptoms have disappeared. Furthermore, all patients with chronic cough should be investigated and the cause corrected if possible. If irreversible pathologic changes such as bronchiectasis, pulmonary fibrosis, or simple chronic bronchitis are found, then scrupulous attention to the pre- and postoperative evacuation of sputum should be observed. Such patients should be instructed as to the importance of coughing after operation in spite of the discomfort. They should also have a thorough evacuation of sputum for several days and particularly immediately before the operation. This evacuation may be accomplished by regular voluntary coughing, perhaps abetted by postural drainage.

An attempt to diminish oral sepsis should be made by treatment preferably by a dentist or, if one is not available, by the use of oxygen-liberating mouth washes and diligent brushing of the teeth.

The dosage of preoperative sedative should not be so heavy as to cause a long period of sleep following the operation. The use of atropine is not only permissible but advisable if the patient does not have abnormal bronchial secretions before the operation.

The anesthetic should be administered if possible so that the patient awakens promptly at the conclusion of the operation. It is desirable to have the patient cough before leaving the operating room. If such a state of consciousness does not exist in a patient who has signs of tracheobronchial moisture, then catheter suction of the tracheobronchial tree, as described below, should be carried out. This type of aspiration is usually adequate and is certainly easier for both the patient and the surgeon than routine bronchoscopy which is advocated by some surgeons. An impressive observation is the large amount of tracheobronchial mucus which can be recovered from the bronchial tree of patients just leaving the operating table, even when there are no gross signs of retained secretions either by palpation or auscultation. Very recently a patient, who had done well during a thyroidectomy until the closing sutures were being placed, was seen in emergency consultation. Her respirations had become labored and oxygenation of the blood was difficult to maintain. A vocal cord paralysis was feared. She did not present the signs of bronchial moisture, but after laryngoscopic examination revealed normally functioning vocal cords, ten to fifteen cubic centimeters of tenacious mucus were aspirated from the trachea by catheter. Her condition immediately improved. Such an experience supports the advisability of routine catheter aspiration after every general anesthesia if profound unconsciousness still exists at the conclusion of the operation. This procedure has not yet been instituted as a routine in this hospital, but aspiration should be performed on all cases who have the physical signs of retained secretions.

The head-down position should be maintained until full consciousness returns. This simply utilizes the force of gravity to keep the secretions flowing toward the trachea and pharynx. The elevating mechanism of the foot of most hospital beds is not adequate to cause dependency of the trachea with the patient supine. Due to the normal curvature of the dorsal spine, secretions entering the trachea from the stem bronchi must travel uphill in a patient lying on his back. It takes considerable elevation of the feet, for instance with the foot of the bed elevated on the arms of a chair, about two and one-half feet, to put the upper trachea and glottis in a dependent position. The lateral prone position in bed immediately after operation would not require such extreme elevation and probably should be used more extensively.

After the return of consciousness, efforts should be directed toward the prevention of stasis of bronchial secretions. The position of the patient should be changed frequently, from one side to the other. The true lateral position increases the ventilation of the uppermost lung. This can be easily demonstrated on a normal individual by examining him lying on each side. The dependent side will have breath sounds which are poor in this position and become perfectly normal when the sides are reversed. A frequent diagnostic cough may disclose unsuspected mucus.

If physical signs reveal the retained secretions

to be in the right lung, then the patient is turned on the left side so that the right bronchial tree is dependent. This not only allows better aeration of the right lung, but gravity aids in the displacement of the mucus. After retained secretions have been evacuated, many patients are able to perform their prophylactic coughing better in a semi-upright position.

Hyperventilation with carbon dioxide will cause deep breathing in even the most stubborn case of poor cooperation. The carbon dioxide in 15 per cent concentration should be administered with a tightly fitting mask from a combination oxygen and carbon dioxide bag.[4] A closed system anesthetic machine with cylinders of the two gases is the ideal method of administration. The 15 per cent carbon dioxide, 85 per cent oxygen mixture is given until respirations become deep and accelerated, and for at least two minutes thereafter. Carbon dioxide has another advantage. It is an excellent expectorant, making the evacuation of thick mucus much easier.[5]

Of the many measures to aid the cough mechanism, none is so important as the proper instruction of the patient as to the necessity of his coughing. This earnest talk, mentioning the threat of pneumonia, should he fail to cooperate, will as a rule convert the most impassive postoperative mummy into a dynamo of respiratory energy. When dislodged mucus is on its way up, but the patient tires before final evacuation, a little verbal encouragement again will usually produce the secretions. Inasmuch as the force of an effective cough is dependent on the presence of air distal to the obstruction, a series of deep inspirations should precede each cough.

To diminish the pain of the incision, a manual support should be used. For a longitudinal abdominal incision, one hand of the attendant should be placed on each side of the abdomen and the muscles drawn toward the midline. This diminishes the sudden pull on the suture line with the force of each cough.

In cases in which incisional pain seems to be the most important factor in preventing cough, morphine may be employed with full realization that it tends both to depress the respiratory center, and to abolish the cough reflex. To avoid the former disadvantage, caffeine may be given simultaneously with the morphine.

Expectorants are valuable. Carbon dioxide and mentholated steam inhalations, and ammonium chloride by mouth are most commonly used. For patients receiving nothing by mouth, sodium iodide, ten cubic centimeters of 10 per cent solution administered intravenously, has been found beneficial.[12]

TREATMENT

It is obvious that there can be no real division between prevention and treatment. If in spite of preventive measures a real pneumonia or atelectasis develops, we direct our attention both toward the provision of adequate bronchial drainage, and toward chemotherapy.

The measures outlined under prevention are instituted at the first sign of atelectasis or pneumonia. Expectorants and carbon dioxide inhalations are given freely, the patient is turned with the involved lung up, and vigorous coughing is encouraged with support of the incision. Quite frequently the physical signs clear up immediately after the evacuation of sputum. It is, therefore, advisable to examine the lung by auscultation and palpation even during the act of coughing or immediately thereafter. The return of aeration of a segment of lung is dramatic. With vigorous treatment, short of aspiration, most cases can be cleared within twelve hours, and many reports in the literature show satisfactory results with this therapy alone.[10]

Haight has described an ingenious method of bronchial aspiration by passing a number 16 French urethral catheter blindly through the nose and nasopharynx to enter the glottis during a deep inspiration.[3,4] Suction is applied intermittently. By turning the chin far to either the right or the left side, the catheter can be deflected into the opposite bronchial tree. Due to the direct descent of the right main stem bronchus, the catheter most often will enter this side with the chin in the midline. By intermittent aspiration for one or two minutes, bronchial secretions in usually larger amounts than anticipated can be withdrawn. In dyspneic patients, nasal oxygen can be administered through the opposite nostril. This procedure requires a minimum of equipment and can be carried out with the patient in bed.

After some experience with the blind nasal passage of the catheter, we have almost entirely discarded this method for several reasons. There has always been some difficulty in effecting entrance of

the catheter into the glottis. It is a rare case that can be intubated without several attempts, and many cases represent complete failures. The patients requiring bronchial aspiration are sick, with all the discomforts attending any immediate postoperative period, and in addition, they have respiratory difficulty with dyspnea, a sense of suffocation, and apprehension. For these reasons a more certain quick method is desirable. Such a method is afforded by direct visual passage of the catheter, hasty aspiration and return of the patient to his original posture in bed. The tongue and pharynx are lightly sprayed with 2 per cent pontocaine. The patient is placed in a prone position obliquely in bed with his feet at the left lower end (as viewed from the head of the bed) and his head at the right of the bed. The operator stands at the patient's head and an assistant kneels at the side of the bed holding the head for exposure of the larynx. The equipment is checked beforehand to prevent any delay. The larynx is exposed with an anesthetist's laryngoscope (Flagg) and a number 18 French urethral catheter on a straight stylet is inserted into the upper trachea. The laryngoscope and the stylet are quickly removed and aspiration is begun. A Luken's collecting tube is used and the continuous suction is broken at intervals by removing the thumb from the mouth of the tube. After the catheter is inserted, a dyspneic patient is rolled into a semi-upright position immediately by the nurse. For patients not apprehensive or dyspneic the supine position is maintained, turning the patient from side to side. An assistant supports the incision during the procedure. The collecting tube is graduated so that the amount of recovered secretions can be measured. By inverting the tube, the tenacity of the secretions can be estimated. The catheter is moved up and down the tracheobronchial tree with each period of aspiration.

The great disadvantage of this method is the fact that the catheter cannot be as satisfactorily directed into each side of the bronchial tree as with the intranasal passage. However, the uncontrollable cough resulting from the irritation of the bronchial tree by the catheter usually dislodges the secretions for aspiration regardless of the side the catheter actually enters.

The experience of the surgical service in this hospital has been one of incomplete satisfaction with conservative measures alone in the treatment of a full blown case of atelectasis with high fever and a large area of involvement as shown by x-ray. A matter of a few hours may make a tremendous difference in the final outcome. The onset of irreparable bronchial or parenchymal damage, such as the formation of a pulmonary abscess, may occur early under such favorable circumstances as obstruction with distal infection. Therefore, in every case with significant clinical signs, or with x-ray evidence of bronchial blockage, mechanical aspiration by means of an intratracheal catheter, or by bronchoscopy, is carried out.

In general, bronchoscopy is indicated only after failure of catheter suction. It has significant advantages. The lumen of the bronchial tree can be directly inspected, the amount of mucous membrane edema determined, and secretion visualized and usually removed. Likewise, the bronchus serving the involved bronchopulmonary segment can be aspirated individually. Furthermore, drugs can be applied directly to the mucous membrane to decrease the edema and thus enlarge the airway. A pontocaine-adrenalin mixture (equal parts) not only is used on the sponge-carrying applicators but also in some cases is injected with a syringe through the bronchoscope so that the lower lobe bronchi in particular are flushed with the solution. Most cases of typical atelectasis by symptoms, signs or x-ray will present no single large mucous plug seen bronchoscopically either in the primary or secondary divisions. The usual findings are a little tenacious sputum in the trachea or large bronchi without total occlusion. These bronchoscopic findings should be an indication for a flushing of the lobe with an adrenalin mixture not only to shrink the mucosa, but also mechanically to dislodge mucous plugs distal to the limit of vision of the bronchoscope. This procedure is particularly valuable in cases of residual segmental atelectasis following the clearing of most of the lung or lobe by more conservative means. Certain cases may show on bronchoscopy a normal bronchial tree, and yet after treatment with liberal topical application of adrenalin, signs of atelectasis have disappeared. This use of adrenalin is a valuable adjunct to simple bronchoscopic aspiration. We have never seen an adrenalin reaction follow it.

Another maneuver to employ in cases with normal bronchoscopic findings is the passage of a small sponge on sponge-carrying forceps into the sec-

ondary bronchus which by x-ray serves the involved segment of lung. In this way very tenacious mucus can frequently be dislodged.

After mechanical aspiration either by catheter or by bronchoscope, it is important to continue a strict regimen of prophylactic treatment. The secretions will probably form again, particularly after instrumentation, but now the patient has a well aerated lung and it is much easier for him to keep the new secretions evacuated as they form. Of some aid may be the fear of another instrumentation.

A bedside technique for bronchoscopy similar to that employed for catheter aspiration is used in the treatment of very ill patients. With the direct passage of the bronchoscope without the utilization of a laryngoscope, our standard technique for all bronchoscopies, a bronchoscopy performed in bed is almost as easily accomplished as one in a well-equipped operating room.

Chemotherapy, with either sulfonamides or penicillin, is routinely employed in all pulmonary complications even after the successful evacuation of secretions and the immediate relief of obstruction. Pneumonia is usually full blown, or has begun, and added protection is desirable.

Since the treatment of postoperative pneumonia and atelectasis involves the relief of bronchial obstruction, it is a problem for those trained in both the conservative and endoscopic methods of removing these secretions. A vigorous prophylactic regimen will prevent most postoperative pulmonary complications. Such a regimen requires teamwork between the nurse and the house staff, between the house staff and the surgeon, between the anesthetist and the surgeon, and between the surgeon and the endoscopist. The patient himself is an important member of such a team because without his cooperation all conservative prophylactic measures may fail.

BIBLIOGRAPHY

1. Brown, A. L.: Postoperative Pulmonary Atelectasis: Observations on the Importance of Different Types of Bronchial Secretion and Anesthesia, *Archives of Surgery* **22**:976, 1931.
2. de Takats, G., Fenn, G. K., and Jenkinson, E. L.: Reflex Pulmonary Atelectasis, *Journal American Medical Association* **120**:686, 1942.
3. Haight, C.: Intratracheal Suction in the Management of Postoperative Pulmonary Complications, *Annals of Surgery* **107**:218, 1938.
4. Haight, C., and Ransom, H. K.: Observations on the Prevention and Treatment of Postoperative Atelectasis and Bronchopneumonia, *Annals of Surgery* **114**:243, 1941.
5. Holinger, P., Basch, F. P., and Poncher, H. G.: The Influence of Expectorants and Gases on Sputum and the Mucous Membranes of the Tracheobronchial Tree, *Journal American Medical Association* **117**:675, 1941.
6. Jones, D. F., and McClure, W. L.: The Influence of the Transverse Upper Abdominal Incision on the Incidence of Postoperative Pulmonary Complications, *Surgery, Gynecology and Obstetrics* **51**:208, 1930.
7. King, D. S.: Postoperative Pulmonary Complications: A Statistical Study Based on Two Years' Personal Observation, *Surgery, Gynecology and Obstetrics* **56**:43, 1933.
8. Lehman, E. P., Risher, J. C., and Bippus, W. E.: Spinal Anesthesia: A Study of the Postoperative Course, *Annals of Surgery* **106**:118, 1937.
9. Lindskog, G. E.: Postoperative Pulmonary Complications: A Statistical Study Based on Personal Observation of 1,215 Consecutive Major Operations, *Yale Journal of Biology and Medicine* **9**:403, 1937.
10. Moore, A. E.: The Treatment of Postoperative Pulmonary Atelectasis, *Surgery* **5**:420, 1939.
11. Rovenstine, E. A., and Taylor, I. B.: Postoperative Respiratory Complications: Occurrence Following 7,874 Anesthesias, *American Journal Medical Science* **191**:807, 1936.
12. Swineford, O., Jr.: Personal Communication.

MECKEL'S DIVERTICULUM: FIFTY-SIX CASES

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Few names in medical annals have outnumbered the German surname *Meckel*. It is familiar to all students of anatomy, in whose bibliographies it appears repeatedly under the noun *intestines*. A ganglion, a band, a cavity, a rod or cartilage: one each of all these normal entities also has its identifying prefix in the word "Meckel's". With a Greek suffix, *meckelectomy* soon joined the language to denote the surgical removal of the fifth ganglion. And in the literature of pathology for the last 130 years the name "Meckel's diverticulum" has been definitive and frequent; so much so that we find a recent medical editor frankly naming his report on this anomaly, "The Ubiquitous Meckel's".

Not one man, however versatile, but a notable succession of the name has contributed so widely to medical knowledge and nomenclature. They were a father, son, and grandson, members of "a remarkable (but short-lived) family of Prussian anatomists" of the eighteenth and early nineteenth centuries.

Johann Friedrich Meckel, to be known as "the elder", was born at Wetzler, some forty miles east of the Rhine, in 1724. He was graduated from Göttengen University in 1748. The school, then only nine years past its founding, was already famous. It was matched in precocious attainment by this brainy alumnus. His graduation treatise was a monograph on the fifth nerve (*"De quinto pare nervorum cerebri"*) so noteworthy that it promptly gave his name to the submaxillary ganglion he had been the first to describe. Meckel, the Elder, became professor of Botany, Anatomy and Obstetrics at Berlin. He continued his pioneer work in research until his early death in 1774.

A son, Philip Friedrich Theodor, followed closely in his father's stride. His own graduation address from the University of Strassburg in 1777 was "an important dissertation on the internal ear". Meckel's band may immortalize that thesis. He in turn became professor of Anatomy and Surgery at ancient Halle University, and for five years he was editor of the "new archives" of scientific findings published at Leipsig. However, the chief interest of the Younger Meckel's father lay in obstetrics. He is best remembered as "a favorite and highly honored obstetrician at the Russian Court", with its German-born Czarina Maria-Fedorovna. We note here that his own father is also recorded as the first Professor of Midwifery at Berlin's Charité.

An elder son of the Czarina's favorite physician was Johann Friedrich Meckel "The Younger", born at Halle in 1781. His fame would outshine that of his parent and grandparent. Born just 20 years before Johannes Müller, the founder of scientific medicine in Germany, this earlier pioneer pathologist is known as "the greatest comparative anatomist in Germany before Muller". He is also described as "the German Cuvier" in tribute to the great French scientist who with his compatriot Lamarck, and Sir Richard Owen, the Englishman, and the Swiss Agassiz are the four earliest ranking anatomists of medical history. The younger Meckel's contribution includes his work on pathologic anatomy published in 1812-18, his normal human anatomy (1815), his famous atlas of human abnormalities, and an epochal system of comparative anatomy. In 1812 Meckel also translated into the modern German of his day a famous memoir by Caspar Friedrich Wolff, the father of modern embryology, published in 1768 but not yet "accepted". After Meckel's translation, Wolff's memoir on the development of the intestines would be described for a hundred years as "the greatest masterpiece of scientific observation that we possess". Meckel died in 1833, at the height of his powers like his father and grandfather.

In Garrison's *History of Medicine* we read that Johann Friedrich Meckel, the Younger, "is memorable as the discoverer of the Meckel diverticulum". Thus we note that he who is best remembered for his discovery of a comparatively rare congenital defect was an early and diligent student of embryology as well as a great anatomist. It may well have been his thoughtful attention to his predecessor's work on "the development of the intestines in

the chick" that led him to identify "this persistent remnant" which is the intestinal tubular appendage known today as Meckel's diverticulum.

Building on Meckel's original thesis, later authorities have observed that the diverticulum of the terminal ileum is "that vestigial portion of the vitelline duct which remains attached to the mid-gut", and that it is formed in the seventh week of foetal development when the intra-abdominal portion of the yolk-stalk (umbilical vessel) fails to disappear by atrophy.

About 2 per cent of all individuals are believed to have this congenital intestinal anomaly. The majority of them may have mild symptoms only; but Meckel's diverticulum has long been generally recognized as an important surgical entity, "difficult to differentiate from a host of allied conditions and too often confused with the same" (Guthrie). It is reported most often in males 20 years old and younger; but cases have been found at all ages, and it occurs frequently in females.

The occurrence of Meckel's diverticulum in our own surgical practice has interested us tremendously. It is a rare but by no means unimportant presentation. And it remains a most difficult entity to diagnose pre-operatively. We read statements declaring it "impossible to diagnose" before operation. With certain reservations we have found such statements true, for the diagnosis of Meckel's diverticulum remains unsolved. In our own series of 56 cases operated on at the Johnston-Willis Hospital since 1929 only two were diagnosed before operation.

In recent years many improvements have been made in our laboratory equipment; especially this is true of the x-ray. In my opinion based on some experience our own x-ray department is second to none. But in our whole series of cases of diverticulum of the terminal ileum, not a single one was diagnosed by the x-ray. This is certainly no criticism of the department. It simply means that this defect in the terminal ileum does not show up by x-ray.

Failing the right-arm of roentgenology in diagnosis, and realizing the extreme difficulty of differentiating this anomaly by clinical means, we face the necessity of a more vigilant attention to the possibility of a diverticulum at the time of operation. The purpose of this paper is therefore two-fold: to draw certain conclusions from a review of our own series, and to urge the examination of the last 36 inches of the terminal ileum in all laparotomy operations where it is expedient to do so. By routinely following this procedure, a surprising number of Meckel's diverticula will be discovered, and the relief of unexplained symptoms will be frequent.

An interesting if somewhat negative finding in Meckel's diverticulum is the fact that the symptoms are usually mild, unless complicating conditions are already present. The large majority of our cases had a normal white-count, little temperature, if any, with no definite localized area of tenderness. These symptoms are of course in direct ratio to the complications present. One rather interesting symptom, pain in the rectum, which we do not find mentioned previously, has been observed in our series as of possible significance. The agonizing pain in the rectal region occurred in the patient whose lesion proved to be a sizeable diverticulum located in the floor of the pelvis.

Infection, ulceration, obstruction, perforations and hemorrhage are reported as the complications most often met in the surgical treatment of Meckel's diverticulum. Five to 7 per cent of all internal obstructions are caused by this malformation; also, Meckel's diverticulum may lead to intussusception by becoming invaginated into the ileum.

The type of operation for this condition varies with the type of lesion found. The operation must be selective and adapted to each individual case. It may vary from complete resection of the ileum to simple invagination of the pouch found. With our improved technique of resections the operation *per se* is not serious. In this series of cases, there has been no death. One case, a child aged five, hemorrhaged following operation. The condition was recognized immediately, the resection was re-sutured, and she recovered promptly. There were no other post-operative complications and we have had no recurrences.

From the chart below, based on a detailed study of our series of cases, we note that the diverticulum occurred at all ages from one to forty years, and that it was about as common in males as in females. Fifty-six per cent of these cases were found on routine examination of the terminal ileum after appendectomy. Others were found incidentally at operation for retroversion, uterine fibroids, salpingitis, and hernia repair. Fifty-two per cent of these cases gave a history of pain in the right lower quadrant; 48 per cent were nauseated; 21 per cent

vomited; 10 per cent had diarrhea, and several complained of pain in the rectum. We have also observed that 1.65 per cent of all our appendix cases have had a Meckel's diverticulum.

STATISTICS FROM 56 CASES OF MECKEL'S DIVERTICULUM AT THE JOHNSTON-WILLIS HOSPITAL

Age	1-40 years
Sex	Female 52% Male 48%
Duration of Symptoms	6 hours to 18 years
Found at Appendectomy	56%
Pain in R.L.Q.	52%
Nausea	48%
Vomiting	21%
Diarrhea	10%
Length of Diverticulum	2.5 to 12.5 c.m.
Mortality	0

Case I.—R. C., a fifteen-year-old child was admitted to the hospital April 7, 1940. She gave a history of vague, intermittent pains in the lower abdomen, which had troubled her for several months. The pains had become more severe in the three days before admission. She had also been passing dark blood from her rectum for some time and had been nauseated for the past three days.

Physical examination showed a poorly nourished pale adolescent lying in bed in no great distress. Palpation of the abdomen showed generalized lower abdominal tenderness with acute tenderness and marked muscle spasm in R. L. Q.

Urinalysis was essentially negative. Examination of blood showed the following: WBC 11,050, HBG 60, PMN 75 per cent, PME 4 per cent, Lymp. 18 per cent, MN 3 per cent.

A diagnosis of acute appendicitis was made, and through a right rectus incision an adherent appendix was found and removed. About 12 inches from the ileo-cecal valve the ileum presented a slight constriction, with a subsequent dilatation about six inches long and four inches in circumference. It was evidently a deformity originating in the omphalo-vitelline duct (Meckel's). Six inches of the dilated ileum was resected and an end-to-end anastomosis (Stone) was done. Examination of the specimen showed it to be filled with blood, and there was a definite ulcer present.

The patient had an uneventful post-operative course and was discharged on the 11th day.

Case II.—J. S., male, aged thirty-five years, had consulted his family physician for several years because of lower abdominal discomfort, and for treatment of "pin-worms" (oxyuriasis).

He was considered to be a very nervous man, and unable to do a full day's work. He was referred to us for examination because of a hernia, and was advised to return for appendectomy and repair of his hernia. Three months later he was admitted to Johnston-Willis Hospital. On January 8, 1945, we operated on him with a McBurney incision and removed his appendix. On examination of the ileum a large diverticulum was found, five inches long, and about the size of the ileum at the base. The diverticulum was resected and the patient's hernia repaired. His recovery was uneventful. We are convinced that the diverticulum in this case was responsible for the patient's failing health.

Case III.— M. R. D., white male, aged forty-one, was admitted to Johnston-Willis Hospital May 20, 1945. Four days before he was struck with agonizing pain, described as a severe burning sensation "like a hot poker" in his rectum. The pain reappeared next day in his lower abdomen and had been constant since, with intermittent spells of great severity localized over the bladder area. Had had low grade fever for the past two days, 99° to 100°. No nausea or vomiting. No distention or muscular rigidity. Rectal examination negative. X-ray findings showed no evidence of any filling defect, diverticulum, or constriction in the large bowel. Appendix incompletely filled and showed considerable amount of tenderness when direct pressure was made over same. Examination of blood showed the following: WBC 13,350, PMN 75 per cent, Lymp. 22 per cent, MN 3 per cent. Diagnosis: Acute appendicitis with possible abscess. On May 24 patient was operated on with a McBurney incision under general anesthesia. We removed his appendix and found and excised a large Meckel's diverticulum. The diverticulum was 4½ cm. long by 2 cm. in width and was located on the floor of the pelvis. This patient made an uneventful recovery and left the hospital June 2, 1945.

The following conclusions may be drawn from

our study of this group of cases recorded during the past fifteen years: (1) Diverticulum of the terminal ileum is an important and not infrequent congenital anomaly, whose typical symptoms are consistently vague and inconclusive. (2) The diagnosis is rarely made before operation. Chronic and acute appendicitis are the conditions most often confused with a diverticulum; but various other pathologic conditions are mistaken for it. (3) A Meckel's diverticulum occurs in about 2 per cent of all individuals. If left untreated complications may develop. (4) A thorough examination of the terminal ileum is demanded in all cases where this procedure is feasible. This investigation should be done *routinely* by all who practice abdominal surgery. (5) Removal of a Meckel's diverticulum is safe and the surgical results are highly satisfactory.

BIBLIOGRAPHY

Brennemann, Joseph: Practice of Pediatrics, Vol. III, Chapter 6, W. F. Pryor.

Bunch, George H.: The Ubiquitous Meckel's. *Southern Med. & Surg.*, February, 1938.

Castiglione, Arturo: The History of Medicine, Knopf, p. 595.

Cobb, Donnell B.: Meckel's Diverticulum with Peptic Ulcer. Transactions of the Southern Surg. Assoc. **48**:130, 1935.

Garrison, F. H.: An Introduction to the History of Medicine, W. B. Saunders Co., 1917, Meckel's Diverticulum.

Guthrie, Donald, and Motsay, Dominic S.: *Bull. of Guthrie Clinic* **8**: No. 3, January, 1939.

MacGuire, D. Phillip: Meckel's Diverticulum, *Brit. Med. Journal,* June 8, 1935.

Massachusetts General Hospital, Case Records of the: Acute Meckel's Diverticulum, *New England Journal of Medicine* **222**: No. 6, February 5, 1942.

Pediatric Antiques on Tour.

It has been well said that more progress has been made in pediatrics during the past three or four decades than in all the time before that.

As applied to the feeding part of pediatrics, the Mead Johnson Collection of Pediatric Antiques bears eloquent witness to the great strides made. Without such evidence, it would be difficult, indeed, to imagine our own grandparents being fed from some of these odd-shaped utensils that defied thorough cleansing. To be sure, sterilization and pasteurization were not then in vogue. Not all babies received breast milk in abundance. In the days when wet nurses were common, some of these enterprising women literally did a wholesale business, managing to nurse three or four infants.

The baby's cereal of a century ago was simply stale bread lightly boiled in water, wine or beer. Butter or sugar might be added but the use of milk was regarded as fraught with danger. It was thought, according to Dr. T. G. H. Drake, "Milk might bring on the watery gripes, or the infant might imbibe with the milk the evil passions and frisky habits of the animal supplying the milk".

The Collection has been steadily growing in size and scope and is of increasing interest for teaching purposes via the historical route. Hence it is that, by request, the Collection now goes on an annual pilgrimage to colleges, hospitals, museums, libraries and other institutions of learning. Arrangements may be made for "stopovers" upon application to the curator, Mead Johnson & Company, Evansville 21, Indiana, U. S. A.

Examination of American Board of Ophthalmology.

Due to transportation difficulties the examination of the Board, originally scheduled for Los Angeles, January 28th to 31st, has been changed to San Francisco, June 22nd to 25th, inclusive, 1946.

1946 EXAMINATIONS: Chicago, January 18th through 22nd; New York, April, approximately 10th through 13th; San Francisco, June 22nd through 25th; Chicago, October 9th through 12th.

A new ruling requires that previously accepted candidates mail their lists of surgery to the Board office at least sixty days prior to their examination. All new applicants are now required to send their list with application. Dr. S. Judd Beach, Cape Cottage, Maine, is secretary-treasurer.

THE HYPERPNEA TEST FOR LATENT CORONARY ARTERY DISEASE—A PRELIMINARY REPORT

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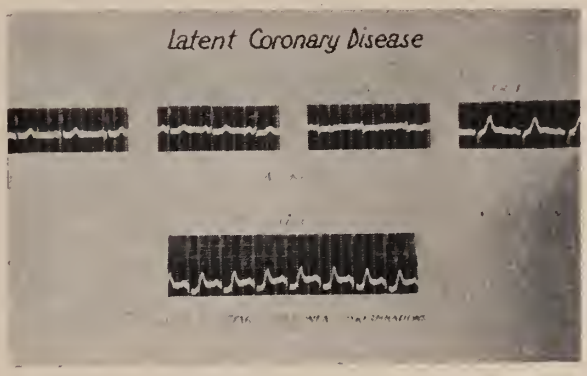
Richmond, Virginia.

Varying stimuli may produce changes in the electrocardiogram taken from the same individual. Excessive tobacco smoking may produce depression or inversion[1] of the T-waves, and the ingestion of cold drinks will occasionally cause flattened or depressed T-waves.[2] Mainzer and Krause[3] have shown that T-wave changes occur if an individual is emotionally disturbed, especially by fear, and Gardberg[4] has demonstrated an abnormal electrocardiogram after the ingestion of food.

Barker and Shrader[5] demonstrated that after voluntary over-ventilation, lasting from three to ten minutes, in normal subjects there was a slight lowering of the T-waves, and patients with hysterical over-ventilation developed tetany and had pronounced flattening of the T-waves. Thompson[6] found hyperventilation to be common in patients with anxiety neuroses. In his study, spontaneous hyperventilation caused marked electrocardiographic changes, with inversion of the T-waves. Normal control subjects showed only slight ST or T-changes. Over-breathing washes excessive amounts of carbon dioxide from the lungs, and secondarily from the blood, resulting in the loss of acid ions and a shift in the blood pH in the direction of alkalinity. Therefore, it could be assumed that the electrocardiographic changes in over-ventilation are due to alkalosis. It is well known that hyperpnea causes an acceleration of the heart and we suggest that mild over-ventilation may be used as a test for latent coronary artery disease.

The normal individual, after exercise, tends to develop higher voltage in the QRS and T-waves. Latent coronary disease, after exercise, will reveal definite depressed ST-segments, with flattened, diphasic, or inverted T-waves. There are several methods used to exercise a suspected case. The most popular is the "two-step test", advocated by Master,[7] in which the patient walks up and down two steps a certain number of times, according to age and sex. The Levy[8] "anoxemia test" is the breathing of a gaseous mixture, containing 10 per cent oxygen and 90 per cent nitrogen. This test is performed by allowing the patient to breathe room air for a few minutes and then changing to the gaseous mixture for about twenty minutes. If the patient becomes distressed, he is returned to 100 per cent oxygen breathing. We feel that the "two-step test" is safe. but difficult to perform on elderly or debilitated patients, especially if they suffer from dyspnea or arthritis. The "anoxemia test" is considered a rather drastic procedure and not without danger in a coronary subject.

A short period of hyperpnea for ten to fifteen respirations will cause acceleration of the pulse and does



not harm even the most severe cardiac, but we think that the combination of respiratory and cardiac strain is sufficient to produce diagnostic electrocardiographic changes in certain latent cases of coronary insufficiency. In our method, the standard electrocardiogram is taken, but during the fourth lead the patient is told to inhale and exhale rapidly for ten respirations. The portion of the fourth lead after this voluntary hyperpnea is compared with the fourth lead prior to the exercise.

The case for illustration was a white male, age forty-five, who complained of chest pain and indigestion. He had suffered from indigestion after eating heavy meals for the past three years, and recently had developed a sense of pressure over his anterior chest. There was no radiation of the discomfort, but it was definitely worse after exercise and relieved by rest. During the past six months the pain

had become very severe and the least exertion would produce discomfort. The physical examination showed a husky, short male, with normal eye grounds. There was no evidence of heart failure, the heart was not enlarged, there were no murmurs, and the blood pressure was 130/80. Hematological studies and urinalyses were normal. The Wassermann was negative. The electrocardiogram, prior to exercise, was considered within normal limits. After hyperpnea for ten respirations, marked ST and T-changes developed, and were considered diagnostic for coronary insufficiency.

DISCUSSION

We have attempted to reproduce the electrocardiographic phenomena on ten borderline cases of coronary disease and have been successful in reproducing these ST-IV and T-IV changes in three patients. It is very difficult to explain the many exceptions that do not develop any changes following hyperpnea. There must be an added stress factor and this may explain why some individuals, even with definite coronary artery[1] disease, do not show the typical electrocardiographic changes. In a coronary suspect, having a normal electrocardiogram, it certainly would be wise to attempt this type of exercise. Probably the same results would be obtained from either the "exercise test" of Master or the "anoxemia test" of Levy, but if this simple test gives positive results, it should be sufficient to confirm the diagnosis of latent coronary insufficiency.

It is well known that voluntary hyper-ventilation, if prolonged, will produce alkalosis and some flattening of the T-waves. These changes in the T-waves take place in from ninety seconds to three minutes, but none of the changes are comparable to the type of ST depression and T-changes demonstrated in individuals with coronary insufficiency. In our test of rapid deep breathing, the duration of the test is only about five seconds, and this period of time is too short to produce alkalosis, so we believe that the electrocardiographic changes in latent coronary disease, produced by mild hyper-ventilation, are due to momentary stress on a diseased heart, and not caused by alkalosis.

This test is without danger and, in a certain number of cases, will give satisfactory results. It is not completely efficient, but certainly is an adjunct method of study in borderline cases.

CONCLUSION

We have demonstrated a hyperpnea test that may be used without danger and should aid in the diagnosis of latent coronary artery disease.

BIBLIOGRAPHY

1. Graybiel, A., Starr, R. S., and White, P. D.: Electrocardiographic Changes Following the Inhalation of Tobacco Smoke, *Am. Heart J.* **15**:89, 1938.
2. Wilson, F. N., and Finch, Russell: The Effect of Drinking Iced Water upon the Form of the T Deflection of the Electrocardiogram, *Heart* **10**:275, 1923.
3. Mainzer, F., and Krause, M.: Changes of Electrocardiogram Brought About by Fear, *Cardiologia* **3**:286, 1939.
4. Gardberg, M., and Olsen, J.: Electrocardiographic Changes Induced by the Taking of Food, *Am. Heart J.* **17**:725, 1939.
5. Barker, P. S., Shrader, E. L., and Ronzoni, E.: The Effects of Alkalosis and of Acidosis Upon the Human Electrocardiogram, *Am. Heart J.* **17**:169, 1939.
6. Thompson, W. P.: The Electrocardiogram in the Hyperventilation Syndrome, *Am. Heart J.* **25**:372, 1943.
7. Master, A. M., M.C., U.S.N.R.: The Electrocardiogram and the "Two-Step" Exercise. A Test of Cardiac Function and Coronary Insufficiency, *Am. J. Med. Sc.* **207**:435, 1944.
8. Levy, R. L., Williams, N. E., Bruen, H. G., and Carr, H. A.: The "Anoxemia Test" in the Diagnosis of Coronary Insufficiency, *Am. Heart J.* **21**:634, 1941.

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THE CONTROL OF HEMORRHAGE AFTER TONSILLECTOMY THE USE OF THROMBIN*

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During the average tonsillectomy, hemorrhage is controlled by the application of pressure sponges and the ligation of the persistent bleeding vessels. While these fundamental measures are usually adequate, excessive bleeding may tax the skill and ingenuity of the operator. In a previous study of one hundred cases of tonsillectomy and adenoidectomy done under general anesthesia, a record was kept of the quantity of blood in the suction bottle after each operation. The average amount was found to be 56 c.c., the smallest amount was 5 c.c., and the largest was an extraordinary total of 400 c.c. in one patient. In the latter instance, the surgeon would welcome any additional help in securing hemostasis. My experience with thrombin has shown that this substance is an aid in controlling hemorrhage after tonsillectomy. By its use, capillary hemorrhage and venous oozing were reduced, hemostasis was hastened, and the time of operation was shortened. In the dry fossa, the bleeding points of the larger vessels were easily visualized, and, if present, were quickly ligated.

The availability of the potent hemostatic agent, thrombin, is a result of advances in enzyme chemistry, and research in the fractionation of albumin from blood plasma. In the investigation of the effective use of blood plasma in shock, large scale methods were perfected for the isolation of human blood fractions. Plasma fractions left after the preparation of serum albumin include gamma globulin, which has been found valuable in the prevention of measles, isohemagglutinins, useful in typing blood, and purified fractions of fibrinogen and thrombin, which, as hemostatic and adhesive agents, have found an important place in surgical techniques.

The most important factors in the blood clotting mechanism are fibrinogen and thrombin. The fibrinogen forms the structural basis of the clot and the thrombin induces the process of clot formation. The fibrinogen separated from the plasma proteins has been made into fibrin films, fibrin plastics, and into fibrin foam; the fibrin foam can be used with thrombin as an absorbable hemostatic sponge. I have used only the thrombin solution, and have not tried the application of fibrin foam-thrombin fragments. The possible risk of aspirating this material must be kept in mind. In this connection, oxidized cellulose[1] has been used as non-irritating absorbable material to be saturated with thrombin and applied to the wound. It is said that better hemostasis is secured by use of matrix to hold the thrombin than it is by the solution of thrombin alone.

The thrombin I have used has been kindly furnished by the Upjohn Company. The material is supplied as a concentrated sterile powder prepared from bovine blood. The powder is stable, but in solution loses its potency in several hours. It can be frozen and thawed repeatedly without deterioration. The physiological clotting action of thrombin produced from beef plasma is the same as thrombin prepared from human plasma. Diluted with a 5-10 c.c. of sterile saline or used in powdered form the thrombin is sprayed or applied with sponges to the fossa. "The choice of concentration to be employed will depend largely on the preference of the operator; the more concentrated the solution, the quicker the effect, and a wide range of clotting activity is available by varying the amount of sterile saline which is used in putting the thrombin into solution."[2] The hemostasis is usually amazing. No evidence of delayed healing or untoward effect has been noted. In the series of thirty-five patients, there were no primary or secondary hemorrhages. Thrombin is not a substitute for careful surgical technique, but is useful as an auxiliary measure in securing hemostasis in many instances. Thrombin has also been found helpful in other otolaryngologic and ophthalmic procedures.

Primary hemorrhage, occurring within 24 hours after operation, is generally the result of incomplete hemostasis during tonsillectomy. Occasionally a ligature may slip or an occluded vessel may be opened by excessive coughing or vomiting. The incidence should be less than 1%. The bleeding is controlled by compression and religation of the offending vessel; thrombin is useful in controlling oozing and thereby helpful in locating the bleeding.

*Read before the Virginia Society of Ophthalmology and Otolaryngology in Richmond, April 28, 1945.

The application of tannic acid, iron salts, and similar material is unreliable and messy. The vasoconstrictor effect of epinephrine may be followed by a secondary vasodilatation which contraindicates its use.

In primary and secondary hemorrhage, morphine sedation is essential. The patient with a considerable loss of blood should be promptly given a blood transfusion. This procedure often stops the pharyngeal bleeding, and at the same time restores the blood content. Many and varied methods have been used successfully by others in controlling obstinate bleeders. These methods include the intramuscular injection of the bleeding area with a solution of procaine hydrochloride and epinephrine hydrochloride; the intravenous use of calcium gluconate; the application of hydrogen peroxide sponges to the tonsil fossa; and the suturing together of the anterior and posterior pillars with and without the use of a tonsil pack. McLaurin[3] has recently reported on the effective use of solution of posterior pituitary twice U. S. P. concentration.

The occurrence of delayed or secondary hemorrhage, three to fourteen days after operations, is not serious, but is extremely annoying. The bleeding is caused by one or more of several factors: trauma, secondary infection, vitamin deficiency, physical exertion, sexual excitation, blood dyscrasias, and aspirin induced hypoprothrombinemia. The prevention of secondary hemorrhage by controlling these factors has presented an interesting problem.

In so far as some degree of secondary infection is found in all of the pharyngeal wounds, it seemed reasonable to attempt to lessen the bacterial inflammation by the use of chemotherapy after operation. In a previous paper,[4] I reported the use of sulfathiazole gum in preventing secondary hemorrhage. The incidence of delayed bleeding was reduced from 6-8% to less than 1%. Chewing both aspirin gum and sulfathiazole gum, the patients seemed to recover faster and to complain less of sore throat.

A similar reduction in the incidence of secondary hemorrhage has been reported by Neivert,[5] using vitamin K to counteract the aspirin induced hypoprothrombinemia. To all who use aspirin or aspergum freely in the post-operative period, this study is important. Work is in progress in several medical centers to confirm the degree of prothrombin deficiency induced by aspirin after tonsillectomy. It would seem, however, that the daily amount of aspirin ingested by the patient during this time is usually considerably less than the minimal quantity of aspirin reported necessary to induce prothrombin deficiency.

Secondary tonsillectomy bleeding is stopped by compression and the application of hemostatics. The tissue is friable and necrotic, and cannot be grasped with a hemostat. Most often the gentle removal of the clot, and pressure applied with cotton sponges is sufficient to control the bleeding. Cunningham[6] has found the local application of powdered sulfapyridine to be effective in the control of vascular oozing in delayed tonsillar hemorrhage. A persistent bleeding will often cease with the application of a saturated solution of silver nitrate to the carefully dried area. Thrombin will materially assist in obtaining a dry field.

CONCLUSION

A review has been given of some of the methods of controlling hemorrhage following tonsil surgery. Thrombin, a potent hemostatic agent, has been found to be of value in securing hemostasis after tonsillectomy.

BIBLIOGRAPHY

1. Uihlein, Alfred, Clagett, O. T., and Osterberg, A. E.: The Use of Oxidized Cellulose for Hemostasis in Surgical Procedures. Proceedings of the Staff Meetings of the Mayo Clinic **20**:29-32, January 24, 1935.
2. Upjohn, E. G.: Personal Communication.
3. McLaurin, J. W.: *Arch. Otolaryn.* **39**:536, June, 1944.
4. McGovern, F. H.: Prevention of Secondary Post-Tonsillectomy Hemorrhage With Sulfathiazole Gum, *Arch. Otolaryng.* **40**:196-7, September, 1944.
5. Neivert, Harry: Late Secondary Tonsillar Hemorrhage. Read before the Section on Otolaryngology at the New York Academy of Medicine, May 17, 1944.
6. Cunningham, B. P.: Clinical and Experimental Studies with Sulfapyridine as Hemostatic Agent, *Ann. Otol., Rhin. and Laryng.,* **51**:301-316 (June), 1942.

BACTERIAL ENDOCARDITIS AND PENICILLIN—REPORT OF TWO CASES WITH DIABETES

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Richmond, Virginia.

Bacterial endocarditis in years past has been uniformly fatal. A new agent in its treatment has recently been introduced, i.e., penicillin. To hasten our knowledge of the effect of this drug in this disease it is helpful to have prompt reports of all cases treated with penicillin. For this reason these two cases are described. They corroborate the statements made by various authors[1] to the effect that penicillin may be an effective agent in treating this disease.

Case 1.—A white woman, 33 years old, saw me in 1936 on account of languor and lassitude. Palpitation on exertion had been present for 5 years. Diabetes had been discovered in 1935. On physical examination a presystolic rumble and a mid-diastolic murmur were noted at the apex of the heart. The blood pressure was 115/75. Otherwise the findings were not significant. The laboratory work disclosed uncontrolled diabetes. The diabetes was brought under control with diet and small doses of insulin. The next month she had dyspnea, tachycardia, and sharp pains in the precordium intermittently for 24 hours after walking upstairs. Dr. P. D. Camp saw her at this time and confirmed the above physical signs. By the following year slight cardiac enlargement was noted. Frequent sore throats occurred, the diabetes became more severe, and cardiac symptoms became more pronounced. Violent headaches occurred which were entirely relieved by estrogenic substance. Acute pulmonary edema first occurred in 1939. Congestive failure in spite of restricted activity and digitalization developed in 1940. By 1942 mercupurin was being used, and in 1943 and 1944 it was given at short intervals.

On August 8, 1944, the patient, now 41 years old, began to have pain in the right chest laterally, aggravated by sneezing. The following day mercupurin was given for dyspnea and swelling of the feet and torso. Three hours later the arms felt weak and limp and a numb feeling crept upwards to the face. This was followed by generalized aching and weakness, and nausea. The next day the temperature was 99 degrees. No other changes in the physical examination were noted, except that the edema had disappeared. On August 15th the first chill occurred. During the next few days chills and fever occurred daily. No localizing signs of infection were detected, nor was evidence of embolism found at any time. On August 18th the first positive blood culture was obtained. Two more positive cultures for streptococcus viridans were obtained on the 21st and the 23rd. Penicillin, 30,000 units intramuscularly every 3 hours, was begun on August 21st. On the 27th the interval between doses was increased to every 6 hours because the patient complained so bitterly of pain. On the 30th the dose was changed to 20,000 units and the interval to every 4 hours and the drug was continued in this manner until September 4th, a total of 14 days of medication. Blood cultures on August 30th, September 5th, October 28th and two in February, 1945, were negative. No chills have occurred and the body temperature has been normal since September 3rd except for two acute illnesses. From September, 1944, to February, 1945, she has required routine treatment for recurring attacks of congestive failure but has continued to work between these spells. For the past 12 months she has shown no sign of recurrence of the bacterial endocarditis.

Case 2.—A 59 year old man was seen first by me on July 6, 1944. A month before this he noted gradual stiffness and soreness in the hips which eventually assumed the characteristics of lumbago and right sciatica. After one week of pain he had an abscessed tooth extracted. Within the next few days a temperature of 101.5 degrees was noted. Glycosuria had been found in March, 1938, and at this time, June 15, 1944, it was detected again. The patient was sent to the hospital on June 30, 1944, and seen by me one week later. At this time the man was weak, sweating, and in much pain. The other significant findings were a loud systolic heart murmur with suggestion of a thrill at the apex, a blood pressure of 190/105, a few basal rales, a palpable spleen, and a tender sciatic nerve.

Significant laboratory work included a blood sugar of 274 mg., glycosuria, albuminuria, a hemoglobin of 88%, and a white blood count of 7,600 with 83% neutrophilic leucocytes. The diabetes was brought under control by diet and insulin. A posi-

tive blood culture was obtained, yielding a non-hemolytic streptococcus. Penicillin intra-muscularly was begun on July 19th, 25,000 units initially, and 20,000 units every three hours thereafter. On July 29th, due to persistent fever, the penicillin was increased to 30,000 units every three hours, even though the blood culture was then negative. On August 4th the drug was stopped and the temperature remained normal thereafter. Improvement in the patient's general condition was steady until late November, 1944, although the lumbago recurred early in that month. On November 23rd dyspnea and edema came on rather suddenly. Two days later he was seen at the office. The heart showed enlargement, many premature beats, a loud apical systolic murmur, and a rate of 102. The blood pressure was 195/145. Rales were heard at the base of the right lung. Edema of the legs was marked. Digitalis and mercupurin were given with much lessening of the edema and dyspnea by December 7th. About 5:00 A. M. on December 8, 1944, the patient died suddenly in his sleep. There was no recurrence of fever from August 4th until death four months later, and four blood cultures were negative, the latest being November 25, 1944.

Autopsy after embalming showed an enlarged heart, especially the left ventricle. The cusps of the aortic valve were thickened and fused at their bases. The mitral leaflets were thickened and there was marked retraction of the chordae. No vegetations were found but careful examination revealed a tiny ulcer on the base of the mitral valve in which masses of bacteria were seen in the submucosa.

COMMENT.

In neither of these two cases were definite emboli detected. The first patient had abrupt pain alongside the right knee that persisted with tenderness for three days. The 2nd case had one attack of pain in the left kidney area with 1-2 red cells in the urine. Autopsy demonstrated bacteria in an active ulcer on a valve leaflet in the 2nd case. In the 1st case it seems likely, in the absence of any other detectable site for the infection, that bacterial endocarditis was present or, at the very least, that this was a case which soon would have become an obvious example of bacterial endocarditis. It seems equally likely that improvement was due to the use of penicillin in spite of other adverse reports.[2]

SUMMARY AND CONCLUSIONS.

Two diabetics, one very severe, with apparent bacterial endocarditis are reported. Each responded to the use of penicillin (over 2 million units) to the extent that there was no fever and at least 4 blood cultures were negative over a period of 12 and 3½ months, respectively. Although one patient who apparently was cured of his infection showed an active lesion at autopsy, it is not unlikely that recovery may have followed a second or third course of treatment had a clinical exacerbation occurred. In view of the hopeless nature of the cases previously and the apparent benefit in some cases treated with penicillin, it seems worthwhile to continue trying the drug in future cases until it has been proved worthless or a better remedy found. It is possible that the drug will be of help in early cases such as these and not in late and well established cases with emboli. The response of these two patients confirms our impression that controlled diabetes is not a significant medical hazard.

ADDENDUM.

Case No. 1 died several hundred miles away from this city apparently of acute pulmonary edema, possibly associated with hypoglycemia, fourteen months after the treatment with penicillin for the bacterial endocarditis. The examination of the heart after embalming showed mitral stenosis with a firm grayish fibrotic nodule 2 mm. in diameter on the posterior wall of the mitral valve on the auricular surface. There were no superficial ulcerations. The microscopic examination showed the nodule to be a fairly well organized thrombus containing several small deposits of calcium. There was partially hyalinized fibrous tissue with a scattering of chronic inflammatory cells. Adjacent to the thrombus were a number of perivascular areas containing necrotic debris and acute inflammatory cells. No bacteria were seen.

REFERENCES

1. White, P. D., Mathews, M. W., and Evans, E.: Treatment of Subacute Bacterial Endocarditis, *Ann. Int. Med.* **22**:61, 1945.

Collins, B. C.: Subacute Bacterial Endocarditis Treated with Penicillin, *J.A.M.A.* **126**:233, 1944.

Dawson, M. H., and Hobby, G. L.: The Clinical Use of Penicillin, *J.A.M.A.* **124**:611, 1944.

Loewe, L., Rosenblatt, P., Greene, H. J., and Russell, M.: Combined Penicillin and Heparin Therapy of Subacute Bacterial Endocarditis, *J.A.M.A.* **124**:144, 1944.

Dawson, M. H., and Hunter, T. H.: Treatment of Subacute Bacterial Endocarditis with Penicillin, *J.A.M.A.* **127**:129, 1945.

2. Kelson, S. R.: Treatment of Subacute Bacterial Endocarditis Since 1939, *Ann. Int. Med.*, **22**:75, 1944.

Keefer, C. S.: Discussion of Papers on Penicillin, *J.A.M.A.* **124**:637, 1944.

Herrell, W. E, Nickols, D. R., and Heilman, D. H.: Penicillin, *J.A.M.A.* **125**:1003, 1944.

Medical Arts Building.

Black Widow Bite

Which failed to respond to usual treatment, improved with application of new drug. Two doctors reported spectacular success in the treatment of a Black Widow spider bite with neostigmine methylsulfate, a synthetic drug which has been noted for its effect in decreasing muscle fatigue, according to the December 8 issue of *The Journal of the American Medical Association.*

James E. Bell, Jr., M.D., Intern, Roper Hospital, and John A. Boone, M.D., Assistant Professor of Medicine at the Medical College of the State of South Carolina, wrote that since no relief was obtainable for their patient by the usual method of treatment, they used an injection of neostigmine methylsulfate with atropine, and within 15 minutes a change for the better was evident. Within one hour there was complete relief of muscle spasm and pain.

The Black Widow spider is widely distributed in the United States, being especially prevalent in the southern states, the Ohio valley and the western coastal region. It is shiny and coal black and is marked with an hourglass-shaped spot of red or orange on the middle of the abdomen. It inhabits dimly lighted, secluded places.

The patient, upon receiving the bite feels a sharp, stinging sensation which is very painful but lasts only a moment. Fifteen to 45 minutes later pain begins to radiate from the region of the bite. According to the authors the pain is "most severe in the abdomen and legs but also spreads generally to the back, shoulders and arms."

Previously, neostigmine has been used in a wide variety of diseases in which muscular paralysis, spasms, tension or spasticity and cramps were important symptoms. Investigators working with this drug have reported that patients treated with neostigmine showed relaxation of muscular spasms, relief from pain, increasing strength and improvement in muscular coordination.

Psychiatrists Organize to Meet National Emergency.

The two leading national organizations in the field of psychiatry have united to help meet the critical situation in which the country finds itself as a result of psychiatric problems arising out of the war. In the field of psychiatry, which has always been short of well-trained personnel, there are literally thousands of places where psychiatrists are needed. There also are thousands of medical men who had some experience in psychiatry during the war, and are now seeking training opportunities.

As an initial step in bringing the psychiatrically trained and psychiatrically minded medical men together with the opportunities, the American Psychiatric Association, the oldest specialty society in America, founded more than one hundred years ago, has joined forces with the National Committee for Mental Hygiene, the pioneer organization in the field of mental health, which was founded in 1909.

Physicians interested in psychiatry are invited to send in full biographical statements including personal data, education, training, experience and special desires, in order that this service may be of the greatest possible assistance to them. Inquiries should be addressed to Captain Forrest M. Harrison, (MC) USN, National Committee for Mental Hygiene, 1790 Broadway, New York City 19.

CORRESPONDENCE

Merpectojel Treatment for Poison Ivy and Poison Oak—A Preliminary Report.

TO THE EDITOR:

In the search for a cleaner and more easily applied local medicament for the distressing rash, especially the oozing eczematoid type, associated with poison ivy and poison oak, merpectojel* was tried. Merpectojel lent itself to trial because of its quick drying property when thinly applied and because its cellophane-like finish coated over the oozing areas with a transparent "window".

It was purely imagination which transferred this hitherto strictly vaginal drug to external body uses. The clear cellophane-like film which results when merpectojel is locally applied gave indication for its use in oozing eczematoid conditions, rhus tox, or otherwise. Its sealing properties suggest its use in burns—in sealing in the exudation. It is hoped that some trial be made of this drug in the treatment of burns. There is one very commendable property which merpectojel has that makes it superior to tannic acid applications, and that is, it is water soluble to a great extent. After it has been on a few days, warm water and a wet towel will remove the merpectojel without much difficulty in the less thickly applied areas. In locations where it is thickly applied, a splinter forceps will do a great deal in lifting off the membrane. This is not necessary, however, as the pectin has healing properties, and the phenyl mercuric nitrate is antiseptic. These two ingredients are contained in the merpectojel preparation, and both are combined into a clear jelly, which need not be removed unless there is too much discomfort from the constricting adhesiveness of the preparation.

This pectinum preparation has a better cosmetic appearance than the dirtiness of potassium permanganate's purple and vermillion. It has much more nicety than the black residue of tannic acid preparations. Calamine lotion and ointment are so obviously noticeable in contrasting whiteness, that other and easier means of treatment are sought.

Merpectojel is not intended to replace the injection treatment of the aqueous or oily extracts. The injection treatment is really the treatment of choice in rhus dermatitis. The distressing rash of the early stages in the vesicular or in the oozing form are all responsive to the pectin-phenyl mercuric nitrate preparation used in the cases tried in this preliminary report. Applications of this jelly-film not only sealed in the exudative areas, thus preventing the spread to adjacent skin places, but also relieved a lot of the itching so frequently a coincident complaint.

The following five cases of rhus toxicodendron plant poisoning were treated with the ointment-jelly discussed in this paper:

Case 1.—Master R., age 5, had reddish vesicular rash on chest and arms caused by poison ivy trifoliate vine. Merpectojel jelly was generously applied over the dermatitis and allowed to dry. A cellophane-like covering enclosed the whole of the rash, keeping it localized. The ointment began to peel in three days, the edges first upturning, so that it was easy to complete the removal of the dried drug. The rash was now dry and scaling, the scales coming off with the jelly, leaving a pinkish epidermis.

Case 2.—B. C., age 22. Rhus diversiloba (poison oak) trifoliate shrub was the cause of the abundant, vesicular, and exudative type rash covering almost the entire body—apparently scattered by transfer of the oozing fluid. Many local preparations were used prior to the merpectojel and injection combination treatment, but the rash was getting worse in spite of efforts to control it. Merpectojel was thinly applied in layers and allowed to dry. All exudation stopped and the transparency of the film presented a window for observation of the progress of the healing process. The film was left on for six days, reapplying where and when necessary. The patient was also given 1 c.c. each day of an accepted extract. Whether the jelly or the injection did the most good is a question, but I am inclined to believe that the injection treatment is more convincing in its end results. However, it is a definite advantage to have the exudative areas covered to prevent further spread and to prevent the ugly wet appearance. This case was one of the severer ones and it was obvious that the jelly application did a great deal of good. The film was removed with warm water and wet towel rubbing.

*Wm. P. Poythress, Inc., Richmond, Va., by whom merpectojel is suggested in the treatment of burned and eczematoid conditions.

Case 3.—R. A., age 35. This was another example of plant dermatitis caused by the Rhus family. This case was exudative, vesicular, and generalized. The jelly treatment was started and the exudations were stopped and localized. The jelly was applied in layers, and reinforced as needed. Injections were started to assist the mechanical work of the jelly. Definite improvement was seen through the film and in five days the jelly-dry-film was removed. The underlying epidermis was pink and dry in the non-exudative areas and clean and healing in the oozing areas. Reapplication of a few layers of the jelly was all that was necessary to relieve this case.

Case 4.—L. S., age 24. This was an early case of plant dermatitis, probably poison ivy, showing erythematous, and papular rashes on the right leg. The jelly-film was applied and allowed to remain for three days. No injections were given. Rash left and no further spread was noted.

Case 5.—H. S., age 50, was essentially the same as Cases 2 and 3. The results were similar.

CONCLUSIONS

Another sealing and quick-drying agent is suggested in the treatment of plant dermatitis. Certain advantages are claimed for the merpectojel jelly used. It is clean, easily applied, healing, and is more easily removed than most preparations used in the treatment of poison ivy and poison oak dermatitis.

A. J. RUSSO, M.D.,
Salem, Va.

PUBLIC HEALTH

I. C. RIGGIN, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for November, 1945, as compared with the same month in 1944, and for the period of January through November, 1945, compared with the same period in 1944, follows:

	Nov. 1945	Nov. 1944	Jan.-Nov. 1945	Jan.-Nov. 1944
Typhoid and Paratyphoid Fever	10	6	162	120
Diarrhea and Dysentery	178	443	6,990	6,246
Measles	107	22	1,387	17,073
Scarlet Fever	506	283	3,798	2,622
Diphtheria	130	58	483	294
Poliomyelitis	8	40	329	742
Meningitis	3	6	205	489
Undulant Fever	0	1	30	36
Rocky Mountain Spotted Fever	6	1	99	80
Tularemia	2	2	42	44

TREND OF MORTALITY FROM DIABETES IN VIRGINIA

The general death rate from diabetes in Virginia has tended upward more or less steadily during the past thirty years. The rate of 9.6 deaths per 100,000 population in the State in 1915 rose to 19.1 in 1944, representing an increase in mortality of almost 100 per cent. There were 534 deaths from this disease in Virginia in 1944, in comparison with 211 in 1915. A comparable rising trend is noted for the nation. The mortality rate of 17.6 for the United States in 1915 had mounted to 27.1 in 1943, the latest year of available data.

A prominent factor in the reported increase is better diagnosis of diabetes among the older age-groups. Contributing also to higher mortality is the change in the age-composition of the population, which now includes a larger proportion of older people—the age-bracket in which diabetes is most frequently found. Despite the progressive increase in mortality, however, the average age at death for diabetics has been steadily rising, resulting in a longer life-span than ever before.

The sharp, upward trend in total deaths from diabetes obscures the fact that a substantial improvement has taken place in mortality from this cause in *childhood* and in *young adults*. Definite improvement is observed before the age of 45 years. The death rate for diabetics under 25 years of age, during the past quarter of a century in Virginia shows a reduction of 29 per cent—from a rate of 2.1 per 100,000 population in 1920 to 1.5 in 1944. For the age-group 25 to 44 years, the rates show an even larger decrease, from 8.4 in 1920 to 5.1 in 1944—a reduction of 39 per cent. The most striking proof of the value of insulin therapy since its discovery in the early 1920's is the success in prolonging the lives of diabetics.

For each of the older age-groups, however, the

mortality trend for diabetes has been consistently upward. The rate for persons 45 to 54 years increased from 15.5 in 1920 to 26.5 in 1944. For the age-bracket 55 to 64 years, the rate rose from 34.0 in 1920 to 73.0 in 1944. The maximum rise in death rates took place in the age-span past 65 years, when the rate of 66.0 in 1920 climbed to 159.1 in 1944, representing a gain of 141 per cent during the twenty-five year period.

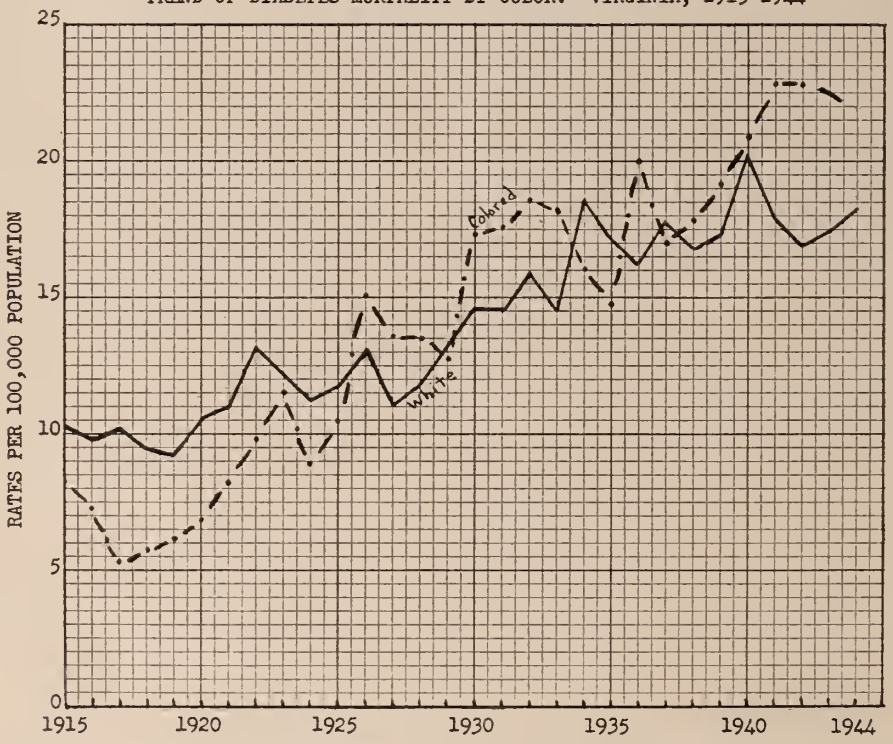
Mortality experience indicates that, at present, women are the chief victims of diabetes. In 1944 three hundred and forty-two females succumbed to this disease in comparison with one hundred and ninety-two males. Also, diabetes mortality has increased at a much more rapid rate among females than males. In 1920 the rates for the two sexes were almost equal—9.2 for males and 9.6 for females. By 1944 the rate for females (24.6) was almost twice that for males (13.6).

Formerly, death rates for diabetes among colored persons in comparison with white would indicate that Negroes were almost immune to this disease. However, with improvement in medical diagnosis, and a larger proportion of colored people exposed to conditions of urban life, the colored rate has consistently risen during the past 30 years. In 1944 the rate was 21.9 in comparison with the white rate of 18.2. The graph below shows the trends of white and colored rates for the past three decades in the State.

It is interesting to note that, contrary to the continued upward trend in diabetes in the past, the average annual total death rate from this cause during wartime (18.3) was lower than the average rate of 19.0 for the prewar period, 1939-1941. This was particularly gratifying, as the middle-age sector of the population, including a large proportion of the diabetics, comprised a group of persons in executive and managerial positions and, therefore, of especial importance to the war effort.

The continued rise in reported diabetes mortality reflects the working of many forces—better diagnosis, an aging population, and greater urbanization. The outlook, therefore, is not as alarming as mortality trends would indicate. However, the control of diabetes is an important and challenging problem to the medical profession. Early diagnosis and treatment of this disease are, of course, of prime importance. Also, an increased effort in combating the cardiovascular-renal diseases prevalent in later life would conceivably raise the average age at death of diabetics, as deaths in combination with the degenerative diseases are charged to diabetes.

TREND OF DIABETES MORTALITY BY COLOR: VIRGINIA, 1915-1944



SHALL THE PREGNANT WOMAN EAT?

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

Evidence has accumulated to show that food intake during pregnancy has an important bearing on both the expectant mother and the developing foetus. An outstanding study, reported in 1941, brings out evidence that poor nutrition in expectant mothers results in an increase in the occurrence of anemia and infection during the prenatal period, a greater incidence of sepsis and hemorrhage during labor, and more complications during the puerperium. The addition of simple essential foods to the diets of a group of prenatal patients in a controlled group showed that the complications during pregnancy were less and the outcome of the infants up to the age of six months was improved.

The demands of the prenatal patient are the same as that of the non-pregnant woman when additions are made to the food supply. During pregnancy the protein and calcium intake should be approximately doubled; the iron and vitamins, increased about one-fourth.

A "rule-of-thumb" to meet the daily requirements:

Milk_____One quart as a drink or used in cooking.

Meat_____Once, preferably twice.

Eggs_____One or two.

Vegetables_____One raw and two cooked. The green or yellow leafy vegetables are to be given preference.

Fruits_____Once or twice (fresh—dried—canned). Tomatoes when fresh citrus fruits are not available.

Butter_____A liberal serving.

Cereals_____Oatmeal, whole wheat or other dark cooked cereals.

Bread and Sweets___Sparingly.

Condiments____Particularly salt, very sparingly on any food.

If weight gain is too rapid, use less sweets, fats, cereals, bread and potatoes. Not more than two and one-half pounds should be gained during any one month, and not more than a total of 20 to 25 pounds during the entire pregnancy.

Recent dietary conversation has shifted from calories to vitamins. An effort has been made here to meet both requirements without complicating the procedure.

Suggested diet lists may be obtained by writing: Committee on Maternal Health, Medical Society of Virginia, 1200 East Clay Street, Richmond 19, Virginia.

Upjohn to Erect New Antibiotic Plant.

With the purchase of 500 acres four miles southeast of the city, the Upjohn Company, Kalamazoo, Michigan, recently announced plans to expand its facilities for the manufacture of antibiotics. Donald S. Gilmore, president and general manager, indicated that construction of the first unit, a modern two-story building 137 by 251 feet, will get under way within the next 30 to 60 days.

The new building will be a brick-faced steel and concrete structure, lined throughout the interior with glazed tile.

Streptomyoin, as yet produced only in pilot laboratory quantities, will be put into large scale production when the new plant is finished. Dr. George F. Cartland, who has been head of the Company's research work in antibiotics, will supervise the operation of the new unit under Dr. M. C. Hart, vice president and director of research.

MISCELLANEOUS

Hugh Hampton Young—An Appreciation.

In the death of Hugh Hampton Young, Professor of Urologic Surgery and Director of the James Buchanan Brady Institute of the Johns Hopkins Hospital, the nation and the world of science have lost one of the truly great men. Born in San Antonio, Texas, the son of a Confederate General and of a Virginia mother, Doctor Young's youth was spent in Virginia where he attended the University. The devotion of Dr. Young to the University of Virginia, his interest in the development of its medical school and the alumni association continued throughout his life. With the opening of the Johns Hopkins Hospital Dr. Young early became a surgical interne and his ingenuity aroused the interest of Professor William S. Halsted, one of the master surgeons of all time. Under Dr. Halsted's tutelage, Young began the development of surgery of the urinary tract in general and of the prostate gland in particular. His progress in this field gave him fame and placed him among the immortals that have made the Hopkins group of doctors famous throughout the world. Hugh Young's genius was of a versatile type. A masterly technician, a meticulous anatomist, an instrumenteur of superb ability, and a profound physiologist, he did probably more than anyone to elevate the specialty of urology to the most exact of the medical sciences from the standpoint of diagnosis and therapy. In his hands the operation of prostatectomy for benign and cancerous lesions, the surgery of the bladder, ureter and kidney, developed to such a high standard of efficiency and excellency as to give honor to his name throughout the scientific world.

In the field of chemotherapy which has within the last few years given us such drugs as sulfonamides and penicillin, Hugh Young was a pioneer. He ardently worked with his students over many years in search for the "Therapia sterilizans magna", a chemical attack on bacterial infection. He was more than partly successful when he gave mercurochrome to the world. The intravenous administration of this drug was the first really scientific attack on septicemia and was the forerunner of sulfonamides and penicillin which are of such momentous value today.

Dr. Young in addition to his scientific discoveries recreated his versatility in his civic interest. His sociologic and political interests, and his contribution to the cultural life of Baltimore and Maryland were outstanding.

Perhaps the greatest achievement of this great man was his ability as a teacher. He possessed that rare gift of inspiring younger men to research and to the perfection of surgical technique. The fruits of this inspiration are amply demonstrated by the fact that many of his associates and pupils now occupy professorial positions in the leading universities in this country and abroad.

His keen and active interest in the development of the American Urological Association and of the American Association of Genito-Urinary Surgeons, in whose meetings he was always an active participant, show the comprehensiveness and unselfishness of his character.

Dr. Young's personality was jovial, generous, uninhibited by conventionalities, yet colored with a respect for scientific exactitude in theory and practice. This won him the friendship and admiration of men great and small throughout the world. His advocacy of social disease control in the armies of the first world war and later in civilian life established a pattern that has been followed successfully in the present world conflict. This program led to a rational method of dealing with this momentous problem and has reduced its magnitude as a major concern in both military and civil life.

In memory of his genius and because of the personal interest which we individually had in this great man, the members of the *Virginia Urological Society* pay tribute to Hugh Hampton Young, a great scientist and a great citizen. The world will lose much in his passing.

Signed:

SAMUEL A. VEST, *President.*
W. W. S. BUTLER, *Vice-President.*
W. W. KOONTZ, *Secretary.*

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—Mrs. P. M. Chichester, Abingdon
President-Elect—Mrs. J. E. Hamner, Petersburg
Recording Secretary—Mrs. Nathan Schuman, Alexandria
Corresponding Secretary—Mrs. L. C. Brawner, Richmond
Treasurer—Mrs. Reuben F. Simms, Richmond
Press and Publicity—Mrs. George Welchons, 2900 Barton Avenue, Richmond 22

Medicine in Rural Virginia.

Doubtless most of the readers of the MONTHLY have reviewed the recent newspapers' abstract and editorial comments of the report and recommendations of the subcommittee of the Virginia Advisory Legislative Council. The report of the Committee was based on a thorough study, including public hearings, of existing conditions of medical needs and facilities in rural Virginia.

Those of us who live in non-urban areas of the State have been cognizant over a period of years of the increasing lack of adequate medical personnel and facilities for people remote from cities and towns. We have seen the older doctors, after years of arduous service under trying conditions of practice, gradually dying out without available replacements. Rural people are keenly aware of the critical situation. They are demanding a solution of the problem. Individually and in groups they are emphasizing their health needs equally with improved educational facilities.

The solution is not an easy one. Young medical graduates in recent years have had training that cannot be utilized effectively in areas remote from hospitals, laboratories and x-ray facilities. For this and other reasons even those whose homes are in rural communities are reluctant to return to them after graduation.

The proposed recommendations of the Committee call for legislation to subsidize medical students for rural practice; extension of Public Health services to counties now lacking them, establishment of health centers and community hospitals in areas where a State-wide survey indicates their need and possibilities of successful operation. Encouragement of *voluntary* hospital insurance, financial aid to the indigent unable to purchase such insurance, examination by physicians of all school children and provision for correction of remedial defects also are included in the committee recommendations.

It is hoped and believed that the program will meet with the endorsement of the medical profession in the State, and that they will use their influence and the aid of their communities to acquaint the legislators with the existing conditions and needs. The program provides the Woman's Auxiliary to the Medical Society with an opportunity for useful work in their respective communities and as an organization.

The contemplated program involves the expenditure of large appropriations over a period of years. Yet, it is an investment in health and should result in dividends that will repay the State financially and promote improved health conditions where they are now sorely needed. Furthermore, such a program is the most effective reply to those proposing Federal Socialized Medicine or any of its modifications under other guises.

PHILIP S. SMITH,
Chairman, Advisory Council.

Mid-Winter Board Meeting.

The Mid-Winter Board Meeting of the Woman's Auxiliary to the Medical Society of Virginia will be held in Richmond, in the Academy of Medicine Building, 1200 East Clay Street, on Wednesday, January 16, 1946, at 11:00 A. M.

Reports and recommendations of officers, chairmen of standing committees and presidents of county auxiliaries will be received.

It is hoped that Dr. Irl C. Riggin, State Health Commissioner of Virginia or someone else well qualified, will speak on Rural Health and Prepaid Medical Service.

The presidents-elect of county auxiliaries are cordially invited to attend this meeting. This is most desirable.

As we plan for the New Year and the years to follow let us remember that we have an obligation and an opportunity to help bring about Peace on Earth among men of Good Will.

With best wishes for a happy and successful year.

MARIE C. CHICHESTER.
(MRS. P. M. CHICHESTER).

Norfolk.

A general meeting of the Woman's Auxiliary to the Norfolk County Medical Society was held at 11 o'clock, November 20, in the library of the Medical Arts Building, with Mrs. C. M. McCoy, President, presiding. Plans for the year's activities were discussed.

The budget was presented and accepted. It included contributions to the Jane Todd Crawford Memorial Fund, the Leigh-Hodges-Wright Memorial Fund, the State Contingent Fund and Red Cross.

Mrs. James W. Anderson, chairman of war service, made an appeal for the Christmas boxes to be sent through the Red Cross to servicemen. The Auxiliary voted a contribution of $10.00 to this project.

The Auxiliary decided to sponsor a subscription dinner at the Norfolk Yacht and Country Club on February 22, to observe Doctors' Day and to honor those doctors who have returned from overseas service. A committee from the Norfolk County Medical Society will meet with a committee from the Auxiliary to work out plans and the service-returned doctors and their wives will be guests of the Norfolk County Medical Society.

The Auxiliary voted to hold its public relations meeting January 26, and its annual luncheon Tuesday, March 26, at the Norfolk Yacht and Country Club, when there will be a speaker on juvenile delinquency.

Mrs. Ben Steingold, chairman of the Jane Todd Crawford Memorial Fund, accepted from the treasurer, Mrs. Mallory Andrews, the contribution to the Fund.

CLARA P. BROCK (MRS. M. F.),
Chairman, Press and Publicity.

Northampton-Accomac Auxiliary.

This Auxiliary held its October meeting at the home of Mrs. S. S. Kellam, Cape Charles, with Mrs. J. M. Lynch and Mrs. S. K. Ames as co-hostesses. A delightful luncheon was served, followed by a business session at which Mrs. C. E. Critcher, president, presided.

It was voted to establish a Memorial Fund in memory of the late Grace Wilkins Holland, a charter member of the Auxiliary, and a former State President.

A letter was read from Mrs. Paul Pearson, retiring State President, announcing the winning of the attendance trophy for the third time by this auxiliary. This award is based on the percentage of members present at all meetings. There are nine auxiliaries in the state, with a membership of 312 members. The Northampton-Accomac Auxiliary is composed of 27 members living in a seventy-five mile area.

The paper for the afternoon was an interesting and concise talk on "The Menace of State Medicine, Federal Control of Medicine, and Medical Practice" by Mrs. Rooker White of Keller, who stated that this legislation is dangerous to everyone, it is to cost twelve billion dollars, to be paid for from payroll deductions and future taxation, and that such practices are un-American.

Mrs. S. K. Ames and Mrs. Rooker White reported a very successful practical nurses' register for Northampton and Accomac Counties.

The retiring President submitted her yearly report, after which she turned over the meeting to the new President, Mrs. S. S. Kellam. Others serving with Mrs. Kellam will be Mrs. B. N. Mears of Belle Haven as vice-president and president-elect; Mrs. William B. Trower of Cape Charles as secretary; and Mrs. J. H. Hiden of Pungoteague as treasurer.

CATHERINE R. TROWER (MRS. HOLLAND),
Chairman, Press and Publicity.

Editorial

The Onset of Labor

MANY apparently simple every day phenomena are difficult to explain. Why a pregnant woman goes into labor is a good example. The ancient Greeks knew that a chick pecked a hole in the shell and emerged from his fetal envelopes by his own power. Reasoning by analogy, they thought that the fetus came into the world by his own efforts. Post mortem births lent color to this supposition. They did not explain a stillbirth, but merely said that it was more difficult. Since Aristotle's time many theories have been advanced. The seat of the cause of the onset of labor has been sought in the uterus, the nervous system, the blood stream, the abdominal muscles, the fetus and the placenta. Williams in his first edition gave eleven causes of the onset of labor that have been seriously entertained in comparatively modern times. (1) Increasing irritability of the uterus in the later months of pregnancy, which is a well known clinical fact, renders the uterus more ready to respond to external stimulation. (2) When the uterus reaches a certain degree of distention, like any other hollow viscus, it must begin to contract and empty itself of its contents. (3) Galen supposed that labor resulted from a gradual dilatation of the cervix, which was brought about by the pressure of the presenting part and this view has had many adherents ever since. (4) Keilmann and Knüpffer advanced the theory that the onset of labor was the result of the gradual formation of the lower uterine segment and the consequent pressure upon the surrounding nervous ganglia. (5) Naegele, Simpson, Scanzoni and others believed that the desidua in the latter weeks of pregnancy underwent fatty degeneration, which resulted in the partial separation of the ovum and its practical conversion into a foreign body, which then gave rise to uterine contractions. (6) Brown-Sequard demonstrated that an excess of carbon dioxide in the blood led to energetic uterine contractions. Why there should be a marked and sudden increase in the maternal blood is not clear. (7) Spiegelberg advanced the view that the onset of labor was due to fetal rather than maternal changes. He considered that the mature fetus needed materials for its sustenance other than those furnished by the placenta, and as the result of insufficient nutrition certain excrementitious substances gained access to the maternal circulation and in some way stimulated the uterine center. (8) Tyler-Smith and others believed that there is an increased tendency towards uterine contractions at the periods at which the menstruation should appear if the patient were not pregnant, and that these reach their acme at about the date of the tenth menstrual period and give rise to labor. (9) Geyl and others believed that Nature after ages of experiment has found the end of the tenth lunar month the most suitable time. (10) Eden and Williams believed that the frequent occurrence of infarct formation in the placenta at term was an evidence of its senility. Where these changes are marked the nutrition of the fetus must be interfered with, and it is possible that certain of its metabolic products may result in the stimulation of the uterine center. (11) It is also a well-known fact that excessive physical exercise, sudden jars or violence, as well as extreme mental emotion, such as grief and anger, may lead to the termination of pregnancy. All the above is a long way of saying that we did not know the cause of the onset of labor. In 1903 when the above "causes" were published we did not know that the placenta was an organ of internal secretion. It seemed plausible that the placental hormone or hormones had a quieting effect upon the uterus and that when the organ became senile and no longer made enough hor-

mones to keep the uterus quiet, the patient fell into labor. Histologically the placenta at term shows increased fibrosis of the villi, fibrin deposition, infarct formation and obliterative endarteritis. Yet estrogen and progesterone, presumably produced by the placenta, reach their highest levels at or just before term.

In a recent study, Mandel, Graff and Graff at Columbia University (*Am. J. Obs. & Gyn.* 50:471, 1945) have studied the physiological activity of the placenta by chemical means. It has been found by Robertson, Heulin, LeBreton and Schaeffer, and Graff, that the nucleocytoplasmic ratio consistently diminished with age, but most rapidly in the earliest stages of growth. They studied 186 placentas that varied from 3 months to term. Two were over due and 14 were missed abortions and stillbirths. Of the 68 at term, forty had had no labor, being delivered by section before the onset of labor. The placentas were placed at once in isotonic saline-citrate solution, and were dissected so as to remove membranes and obvious blood clots. It was divided in a meat chopper and washed with additional saline-citrate solution in order to remove as much blood as possible. The estimation of the chronological age of the placenta is uncertain. A minimum of two and a maximum of four weeks' error may be assumed to exist. Furthermore the NCR (nucleocytoplasmic ratio) varies with the amount of membranes and other inactive tissue present in the specimen examined. Nevertheless there was a negative correlation between the age of the placenta at the NCR. The NCR declined from 8.6 at 2 months to 3.6 at term. At the same time the total placental weight increases from 30 to over 500 grams so that the increase in mass would more than make up for the reduction in physiological activity. Moreover there is no sudden drop in the NCR to cause the sudden onset of labor. While this study is interesting it is not conclusive, for the reason that the author studied the whole placenta. Were they able to study only the hormonal elements it would be significant. The authors themselves say that there is a low correlation between the NCR and the histological picture, suggesting that the histological picture must vary throughout the placenta. It is conceivable that a pancreas with few if any islands of Langerhans, might show a high NCR. One would not be justified in such a case in saying that such a pancreas could not be the cause of diabetes. If we are looking in the right direction for the cause of the onset of labor, we have not yet developed a technic sufficiently refined to demonstrate it.

Now or Never

CONGRESSMEN Wagner, Murray, Dingell, and Pepper have secured President Truman's aid in their efforts to take over the practice of medicine in this country. They see a heaven(?)sent opportunity now while one-third of the medical profession is in the Armed Forces, and therefore unable to express an opinion, and the other two-thirds are so beaten down with overwork that they are impotent. In order to give color to the idea that there is an emergency that brooks no delay, the bureaucrats are putting forth the "facts" that this country is not the healthiest, as is so commonly stated, and that the statement so frequently heard that the rich and the very poor in this country get the best medical care is a myth. They also point to the high percentage of rejectees in the Selective Service, but they do not go to the trouble to break down these figures into the various causes for rejection nor to compare the percentage of rejections with those of other countries.

Congress will do what the people want. The question is, do the people know what they want? Do they want more medicine at more cost, or do they want better medicine

at less cost? There is a fundamental difference in the philosophy of public management and private management. It matters not whether it be railroads or what not, the emphasis in government ownership is cost, and the greater the cost, the more impressive the project. In private ownership, the emphasis is on efficiency. In the last war, the Federal government took over the management of the railroads and everyone knows the result. The freight yards at Alexandria, to mention only one example, became so hopelessly tangled up that Richmond merchants had to send representatives to Alexandria to get their shipments through. In this war the Government kept their hands off the railroads. The equipment and personnel were overtaxed, but there were no tie-ups, and everyone is praising the wonderful work the railroads did.

The practice of medicine is even more "temperamental" than railroading. It is a fine art and for that reason flourishes best only when the environment is right. Political meddling under Bismarck ruined medicine in Germany, and political meddling can do the same in this country. We already have two examples of the practice of medicine under Federal control. The E. M. I. C. is a $44,000,000 a year project that has been in operation long enough to show what it can do. There are no figures available to show what has been accomplished. We are told that it is against the policy of the Children's Bureau to give out maternal and infant death rates. It is common knowledge that neither the doctors nor the patients are pleased with the service.

The Veteran's Administration is the other example of the Government practicing medicine. No one can complain that the Government has not spent enough money on its veterans, but few will contend that they get the right kind of medical care. The new head of the Veteran's Administration admits that the service lacks much to be desired. However, he is determined that in the future the veterans will have the very best. Furthermore, he is convinced that the best medicine is being practiced by doctors who are in private practice. For this reason, the veterans' hospitals, in spite of political opposition, are being built in medical centers where doctors in private practice are available.

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According to Dr. Finkensieper "the Manna of the Israelites is supposed to have been *Lecanora esculente,* a species of lichen plentiful in Algeria and Tartary".

* * * * *

President Truman proposes to remove the financial barrier between patient and doctor and substitute for it a Federal Bureau.

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On the first Christmas day a totalitarian dictator ruled the world; all men paid tribute to Rome; liberty was the possession of the favored few; armed legions everywhere kept the peace and enforced the laws; the economic system was based on slave labor.

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When the MONTHLY reaches you, we will have begun the New Year. The Editor wishes that to each of you it will be a very happy one.

Societies

Petersburg Medical Faculty.

At the annual meeting of the Faculty, held on November 29th, Dr. Fletcher J. Wright, Jr., was elected president; Dr. William B. McIlwaine and Dr. Carney C. Pearce, vice-presidents; and Dr. P. L. Hill re-elected secretary-treasurer.

Richmond Academy of Medicine.

The annual meeting of the Academy was held on December 11th, at which time Dr. I. A. Bigger was installed as president and the following officers elected: president-elect, Dr. Douglas Chapman; vice-presidents, Drs. E. T. Gatewood and B. W. Rawles, Jr. The new board of trustees is composed of the retiring president, Dr. T. Dewey Davis, Drs. Bigger, Chapman, Gatewood, H. Hudnall Ware, Harry Warthen, and James P. Baker.

The Southampton County Medical Society

Held its Fall meeting at the Raiford Memorial Hospital, Franklin, December the 5th, at which time there were exhibits by Parke, Davis and Company and Sharp and Dohme. There was a symposium on Renal Diseases, in which Dr. Clifford Gryte of the Raiford Clinic presented a paper on Acute Glomerulonephritis, and Dr. Kurt Hirsch, also of the Clinic, read one on Differential Diagnosis in Renal Calculi. Dinner followed at which the doctors attending were guests of the Raiford Clinic Staff. The program was resumed after dinner, at which time Dr. Frank L. Apperly of the Medical College of Virginia spoke on Abnormal Renal Physiology, Dr. Harvey Haag, also of the College, on Renal Pharmacology.

Dr. Morgan Raiford is president of this Society and Dr. W. T. McLemore of Courtland secretary.

The Virginia Peninsula Academy of Medicine,

On December the 17th was the guest of the Medical Officers of Camp Patrick Henry and dinner was served at the Officers' Club. Major Marcus A. Feinstein, Captain Charles M. Newman, and Captain Raymond Yesner presented a paper entitled "An Epidemic of Q Fever".

News

The State Hospital Board,

Which met on December 6th in Richmond, awarded prizes to physicians in the several state hospitals for meritorious papers submitted on varying subjects. Dr. E. L. Crumpacker, who is now on leave from the Eastern State Hospital in military service, and Dr. Walther Riese, Pathologist for this hospital, won first prize of $225.00 for a paper on "Studies in Brain Tumors". Dr. Paul Zwick of the Southwestern State Hospital won second prize of $125.00 for a paper entitled "Study of a Case of Fire Setting", and Dr. V. E. Lascara of Central State Hospital third prize of $50.00 on "A Study of the Use of Penicillin in the Treatment of Neurosyphilis". This is the second award made by the Board since the plan was first suggested by Dr. J. Shelton Horsley and adopted by the State Hospital Board in 1941. With larger staffs and because of the great interest in psychiatry coming out of the experiences with mental and neuropsychiatric patients during the war, considerable interest should develop in these contests in the immediate future.

PERSONNEL NEEDED

The State Hospital Board directed its Personnel Committee consisting of Dr. R. Finley Gayle, Jr., Chairman, Dr. R. A. Morison and Mr. H. Minor Davis to redouble their efforts to secure physicians for the several state hospitals and colonies. Thirty-five physicians are now authorized for the several institutions but there are only nineteen in the service. Five of these are conscientious objectors, two are past the retirement age, and one working part time. In reality, therefore, there are only eleven who can be considered as regular full-time physicians.

There is a need for five clinical directors at salary rates of about $5,000.00 annually and sev-

eral assistant physicians at salaries ranging from $2,760.00 to about $5,000.00 Opportunities for progress in psychiatry are unlimited in the Virginia State Hospital System. For the younger physicians experience and training are essential and every facility in Virginia State Hospitals is available including co-operation with the Medical College of Virginia and the University of Virginia Medical School.

Physicians who may be interested may wire or write the Department of Mental Hygiene and Hospitals, 309 North 12th Street, Richmond 19, Virginia, or to Dr. R. Finley Gayle, Jr., c/o The Medical College of Virginia Hospital, Richmond 19, Virginia.

First Refresher Course for Veterans.

The first Refresher Course for medical veterans of World War II was held by the Department of Medicine of the University of Virginia in Charlottesville from December 3rd to 15th. The lectures, ward rounds and clinics were given by members of the University Medical Faculty and the evening sessions were devoted to lectures by invited guests. The guest speakers were Major John H. Dingle, Director of the Army Commission for the study of Respiratory Infections; Dr. Harrison F. Flippin, Consultant in Chemotherapy to the National Research Council; Col. Perrin Long, formerly Medical Consultant for the Italian Theater of Operations; and Dr. Everett I. Evans, Associate Professor of Surgery at the Medical College of Virginia. There was an enrollment of 33 for the course. Twenty-eight of these were veterans. The veterans attending the course were:

Lt. Comdr. J. E. Amiss, Timberville.
Capt. Perry A. Anderson, Rockford, Ill.
Maj. Emerson M. Babb, Ivor.
Capt. J. Motley Booker, Lottsburg.
Capt. Harold M. Boslow, Appalachia.
Capt. Eugene M. Caffey, Charlottesville.
Capt. Stewart Clapp, Kensington, Md.
Maj. Franklin H. Cohen, Norfolk.
Lt. Col. John B. Cousar, Bishopville, S. C.
Lt. Comdr. John C. Crawford, Norfolk.
Capt. H. Haskins Ferrell, Jr., Goochland.
Lt. Col. Earl J. Haden, Ore Bank.
Maj. Robert W. Houseal, Newberry, S. C.
Maj. William M. Jeffries, Richmond.
Capt. Tom C. King, Jr., Anniston, Ala.
Capt. J. L. Llewellyn, Williamston, N. C.
Maj. R. Gregory Magruder, Charlottesville.
Capt. C. F. Manges, Blacksburg.
Capt. Hulburt C. McCoy, Gordonsville.
Capt. Dossey H. McFadden, Goldville, S. C.
Capt. John R. Morris, Jr., Charlottesville.
Capt. Carl I. Pirkle, Prince George.
Capt. Robert J. Scott, Onancock.
Maj. J. Stuart Staley, Marion.
Maj. William L. Taliaferro, Norfolk.
Maj. James W. Tankard, Hilton Village.
Maj. J. T. Thornton, Charlottesville.
Maj. Martin Wisely, Edenton, N. C.

The five civilian physicians were:
Dr. C. L. Booker, Lottsburg.
Dr. George L. Fosque, Onancock.
Dr. Thomas C. Lawford, Hilton Village.
Dr. F. J. Moore, Killarney, W. Va.
Dr. B. K. Weems, Waynesboro.

This course was the first of four to be given alternately every three months for the next year by the Department of Medicine of the University of Virginia and the School of Medicine of the Medical College of Virginia. The next course will be held in March, 1946, at Richmond.

Personnel Changes in State Department of Health.

Dr. James M. Suter has returned to the State service as Health Officer of the Smyth-Washington-Bristol Health District, with headquarters at Abingdon, effective December 6.

Dr. F. C. Heath has been appointed Health Officer of the Giles-Montgomery-Radford Health District and was to report to Christiansburg, effective January 1.

The American College of Physicians

Will resume its annual meetings in 1946 and has definitely chosen Philadelphia, May 13-17, inclusive. Headquarters will be at the Philadelphia Municipal Auditorium, 34th Street below Spruce.

The meeting will be conducted under the presidency of Dr. Ernest E. Irons, Chicago, Illinois, and the General Chairmanship of Dr. George Morris Piersol, Philadelphia, Pennsylvania. Mr. E. R. Loveland, 4200 Pine Street, Philadelphia 4, Pa., is executive secretary of the College.

Dr. Wilbur M. Bowman,

Former major in the Army Medical Corps, has been appointed to the position of chief, medical division of the Fourth U. S. Civil Service Commission, which includes the states of Virginia, North

Carolina, West Virginia, Maryland, and the District of Columbia. This is a war service appointment for the duration. Dr. Bowman was engaged in private practice in Petersburg for seventeen years before entering the Armed Forces in August 1942, and took an active part in the professional life of that city. Practically all of his military service was at Camp Lee and he was commended several times for his excellent work at that post.

Dr. Gilman R. Tyler,

Richmond, has been appointed to the medical staff of Pine Camp Hospital. He succeeds Dr. Felix Brown who has been given an indefinite leave of absence. Dr. Tyler has recently been released from the Army Medical Corps.

Dr. M. J. W. White,

Of Luray, has been released from the Service, and expected to leave about the first of January for a year's work in the Philippine Islands with the American Board of Commissioners for Foreign Missions of the Congregational Christian Church. The Mission which was destroyed by fire during the War will be rebuilt and Dr. White will replace two doctors who were killed. His address while away will be Davao, Davao, P.I. He served in the Philippine and Virgin Islands from 1929 through 1936, before going to Luray.

Directory of Approved Surgical Training Plans.

Chiefly as an aid to medical officers returning from war duty, the American College of Surgeons has published a 424-page directory in which are listed and described the approved programs of graduate training in surgery in 240 civilian hospitals in the United States and Canada, and in 32 Naval, 7 Veterans Administration, and 10 United States Public Health Service Hospitals.

The descriptions of the approved programs include information about the size and type of hospital, organization of the medical staff, facilities for study of the basic medical sciences in their application to surgery, library facilities, clinical material, manner of selecting individuals for training in surgery, scope and method of surgical training, supervision by the medical staff, examination and thesis requirements, and provision, if any, for conferring higher medical degrees.

The Maternal Health Committee

Of the Medical Society of Virginia met at the Virginian Hotel, Lynchburg, November 29. It was recommended:

That a report of the objectionable features of the Pepper Bill be sent to the President of the State Medical Society and, at the same time, information be given on what is being done under the Maternal-Child Health plan for hospitalizing indigent patients.

That Public Health services be extended to include all counties in the State and that the personnel be paid salaries sufficient to promote a high standard of service.

That the MCH clinic service be extended and existing clinics strengthened.

That, as soon as conditions permit, the survey of maternal deaths be resumed.

Dr. Henry Clay Smith,

Formerly of Boyce, is now associated in practice with Dr. William R. Warriner at Crewe.

Married.

Dr. Richard Anderson Michaux and Miss Julia Gray Saunders, both of Richmond, December 8th. Dr. Michaux is a member of the class of '37, Medical College of Virginia, and recently returned from service overseas.

Dr. Walter Motley White, Jr., Charlottesville, and Miss Margaret Hooper Bowman, Berea, Ky., November 29th. He is a graduate of the University of Virginia, Medical Department, in March 1943, and is now on the staff of the University Hospital.

Seaboard Medical Association.

The 50th annual meeting of this Association was held at Virginia Beach December 11-13th, under the presidency of Dr. A. A. Burke, Norfolk. This was one of the largest meetings in its history and the entertainment for the doctors and their guests was most elaborate. The scientific program was also well received.

The following officers were elected: President, Dr. Thomas Leslie Lee, Kinston, N. C.; vice-presidents, Drs. Clarence Porter Jones, Jr., Newport News; Alban Papineau, Plymouth, N. C.; Cora Z. Corpening, Virginia Beach; and H. H. Foster, Norlina, N. C.; and secretary-treasurer, Dr. Clarence Porter

Jones, Newport News, who was re-elected for the thirty-eighth consecutive term.

The next meeting will be held in Kinston, N. C., in December 1946.

Dr. E. Willis Lacy, Jr.,

Formerly of Richmond, is now engaged in the practice of medicine in Winchester, having recently returned from Kansas City, Missouri. He is a graduate of the Medical College of Virginia, class of 1936.

Dr. Thomas L. Gemmill,

Recently discharged from the Medical Corps of the Navy, has joined the staff of St. Albans Hospital at Radford. Dr. Gemmill was a member of the Central State Hospital staff for seven years and was Clinical Director when he went to Radford in 1937. He was engaged in general practice in that city when he entered the service.

The Southern Section of the American Laryngological, Rhinological and Otological Society

Is scheduled to meet in Richmond at John Marshall Hotel, January the 7th, under the chairmanship of Dr. Emmett T. Gatewood of Richmond. The meeting is to start at 9:00 A. M. and the following are the speakers with their subjects:

Dr. H. L. Kearney, New Orleans, La.—Bilateral Granuloma of the Larynx, Following Intratracheal Anesthesia.

Dr. Watt W. Eagle, Durham, N. C.—Secretory Otitis Media.

Dr. Fred E. Hamlin, Roanoke, Va.—An Investigation of Allergy in Routine Nose and Throat Practice.

Dr. J. W. Jervey, Jr., Greenville, S. C.—Contact Ulcer of the Larynx.

Dr. Marvin M. Cullom, Nashville, Tenn.—The Role of Sinus Disease in Eye Pathology.

Dr. Murdock S. Equen, Atlanta, Ga.—Magnetic Extraction of Foreign Bodies from the Air and Food Passages.

Dr. C. C. Swann, Asheville, N. C.—Deep Infections of the Neck.

Dr. V. K. Hart, Charlotte, N. C.—Some Intrathoracic Lesions of Clinical and Pathologic Interest.

Dr. John J. Shea, Memphis, Tenn.—Management of Fractures into the Nasal Sinuses.

Dr. William J. Knauer, Jacksonville, Fla.—Gradenigo's Syndrome: Review of the Literature and Report of Cases.

Dr. William D. Grossman,

Richmond, has been released from Service and returned the first of the year to the State Department of Health where he resumed his work as epidemiologist and head of the bureau of communicable diseases.

Norfolk Health Officer.

Dr. Albert L. Chapman, U. S. Public Health Service, has been assigned to the City of Norfolk as acting health commissioner. Dr. John C. Sleet, city health commissioner, retired as of December 31st and Dr. Chapman will continue the work until a successor is appointed.

Dr. Clifford Gryte

Has joined the staff of Raiford Clinic, Franklin, where he will be in charge of the department of internal medicine. He is a graduate of the Bowman Gray School of Medicine, Winston-Salem, North Carolina, and for the past year has been at St. Luke's Hospital in Bluefield, West Virginia.

American Medical Association.

At the meeting of the House of Delegates of the Association early in December, Dr. Harrison H. Shoulders of Nashville, Tenn., for many years speaker of its House of Delegates, was named president-elect, and Dr. William R. Molony of Los Angeles was elected vice-president. Dr. Olin West and Dr. Josiah J. Moore were re-elected secretary and treasurer, respectively. Dr. Roger I. Lee of Boston succeeded to the presidency. The next annual meeting of the Association is scheduled for San Francisco, July 1-5, 1946.

Of special interest to our readers was the election of Dr. Walter B. Martin of Norfolk as a member of the Council on Medical Service and Public Relations.

Dr. Charles A. Young

Has been released from service and is back in his office, 409 Medical Arts Building, Roanoke. Dr. William F. Hatcher, who has been in the office for

the past three years, will be associated with him in practice. Dr. Young was promoted to the rank of Captain in the Medical Corps of the U. S. Naval Reserve shortly before being released.

Dr. Earl J. Haden,

Recently returned from service in the Army of the United States, has moved to Orange for the general practice of medicine.

The Raiford Memorial Hospital,

At Franklin, had the formal opening of the new clinic and hospital additions on November the 9th. A $226,000 additional construction was made, making the hospital an 80-bed capacity. The obstetrical and pediatric departments are completely new. In addition there have been added a physiotherapy department, new library and administrative departments, and a complete laundry. The following physicians have been added to the attending staff:

Dr. J. A. Grizzard, Drewryville.
Dr. J. J. Grizzard, Branchville.
Dr. Melvin Baynard, Emporia.
Dr. G. M. Naff, Emporia.
Dr. C. E. Martin, Emporia.
Dr. J. B. Kiser, Emporia.
Dr. L. P. Jones, Emporia.
Dr. E. F. Reese, Courtland.
Dr. T. S. Jennings, Waverly.
Dr. T. L. Carter, Gatesville, N. C.
Dr. Q. E. Cooke, Murfreesboro, N. C.
Dr. L. M. Futrell, Murfreesboro, N. C.
And Drs. A. B. Harrison, F. N. Harris and Ernell Harris, colored physicians of Franklin.

Released from Service in Armed Forces.

In addition to names previously listed, we have learned of the recent release from service of the following members of the Medical Society of Virginia:

Dr. James M. Baker, Richmond.
Dr. N. T. Ballou, Fredericksburg.
Dr. Wm. H. Chapman, Jr., Suffolk.
Dr. Kenneth Cooper, Lynchburg.
Dr. C. J. Devine, Norfolk.
Dr. Charles A. Easley, Jr., Danville.
Dr. Marshall P. Gordon, Jr., Richmond.
Dr. Wm. C. Grinnan, Richmond.
Dr. William D. Grossman, Richmond.
Dr. Snowden C. Hall, Jr., Danville.
Dr. Herbert B. Hutt, Alexandria.
Dr. N. B. Jeter, Covington.
Dr. James P. King, Radford.
Dr. William P. McGuire, Winchester.
Dr. Rees Morgan, Roanoke.
Dr. T. Addison Morgan, Franklin.
Dr. Edward W. Perkins, Richmond.
Dr. Carl I. Pirkle, Prince George.
Dr. Fletcher L. Raiford, Franklin.
Dr. Edwin M. Rucker, Richmond.
Dr. Wade H. Saunders, Roanoke.
Dr. James M. Suter, Abingdon.
Dr. James W. Tankard, Hilton Village.
Dr. M. J. W. White, Luray.
Dr. Charles A. Young, Roanoke.
Dr. Wm. W. Zimmerman, Purcellville.

Dr. William A. Read,

Class of '33, University of Virginia, Department of Medicine, after three years in service, recently as chief of the Section of Internal Medicine at Ashburn General Hospital in Texas, has located in Newport News. He has offices in Medical Arts Building and his practice is limited to internal medicine. Before entering the Army, Dr. Read practiced in Cleveland, Ohio, and was associated with Western Reserve University as clinical instructor and was assistant to the director of Medicine at St. Luke's Hospital, also in Cleveland.

Dr. James B. Pettis,

Formerly connected with the staff of the Western State Hospital at Staunton, has recently been promoted to the rank of Captain in the Medical Corps of the U. S. Naval Reserve. He is at present chief of the Neuropsychiatric Service of the U. S. Naval Receiving Hospital, San Francisco, California.

Promotions in Service.

Several promotions recently noted for members of the Medical Society of Virginia are:

Dr. Frederick L. Finch, Richmond, to Commander, U.S.N.R.
Dr. Charles P. Ryland, Washington, D. C., to Commander, U.S.N.R.
Dr. Lemuel E. Mayo, Jr., Portsmouth, to Major, A.U.S.

Dr. Hyman Cantor,

Recently released from active duty in the Army, has re-opened his office at the Medical Arts Building in Petersburg, following post-graduate work in surgery and gynecology at the Mayo Clinic and the Cook County Graduate School of Medicine.

Dr. R. Manton Wilson,

Since the fall of 1941 city coroner of Richmond, is returning to Korea, early in the new year to resume his medical missionary work which was interrupted by the war. Prior to returning to America,

"Smoothage" IN THE CONSTIPATION OF PREGNANCY

The constipation frequently encountered during pregnancy, due to pressure of the fetus on the pelvic bowel, lack of exercise, and restricted diet, is alleviated by Metamucil.

The Smoothage of Metamucil encourages easy, gentle evacuation. It does not interfere with the absorption of vitamins or other food factors.

"Smoothage" describes the gentle, nonirritating action of Metamucil—the highly refined mucilloid of a seed of the psyllium group, Plantago ovata (50%), combined with dextrose (50%).

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ACCEPTED AMERICAN MEDICAL ASSN Council on Pharmacy and Chemistry

SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

Dr. Wilson had spent more than thirty years fighting leprosy in Korea.

The Southeastern Surgical Congress

Will hold its next Assembly at Memphis, March 11, 12, 13, 1946 at the Peabody Hotel. The following is a partial list of those who will take part in the program:

Dr. Conrad G. Collins, New Orleans.
Dr. Merrill N. Foote, Brooklyn.
Dr. Clarence E. Gardner, Durham.
Dr. James E. Hemphill, Charlotte.
Dr. Robert Hingson, Jr., Staten Island.
Dr. Arnold Jackson, Madison, Wis.
Dr. Roy R. Kracke, Birmingham.
Dr. Karl A. Meyer, Chicago.
Dr. J. O. Morgan, Gadsden, Ala.
Dr. Curtice Rosser, Dallas.
Dr. Harold E. Simon, Birmingham.
Dr. G. L. Simpson, Greenville, Ky.
Dr. Horace G. Smithy, Charleston, S. C.

The Medical Profession is invited to attend the Assembly. For information write Dr. B. T. Beasley, Secretary-Manager, Atlanta 3, Georgia.

Virginia Doctors Studying Aviation Medicine.

Lt. Thomas N. Davis, III, and Lt. Guy Dean. University of Virginia, class of '44, Lt. J. R. Troxell, class of '43, and Lt. Rufus Ellett, Medical College of Virginia, class of '44, are students in the School of Aviation Medicine at Randolph Field, Texas. Capt. Charles Clark, class of '43, University of Virginia, is a graduate of the last class from this School.

New Books.

The following are recent additions to the Library of the Medical College of Virginia and are available to our readers under usual library rules:

Archer—The osseous system. A handbook of roentgen diagnosis.
Ballenger—Manual of otology, rhinology & laryngology.
Bargen—The management of colitis.
Barton—And now to live again.
Beckman—Treatment in general practice. 5th ed.
Bray—Manual of laboratory methods in clinical pathology.
Chetwood—Practice of urology and syphilology. 4th ed.
Child—Psychology for the returning service man.
Clark-Kennedy—The art of medicine in relation to the progress of thought.
Collected Papers of the Mayo Clinic and the Mayo Foundation. v. 28, 1936.
Costain—The Black Rose. (Novel).
Cureton—Endurance of young men. (Monograph).
Cutting—A manual of clinical therapeutics: A guide for students and practitioners.
Drinker—Pulmonary edema & inflammation.
Dwight—Medical jurisprudence.
Fieser & Fieser—Organic chemistry.
Gates—Educational psychology.
Gilman—A manual of soil fungi.
Hill—A manual of proctology. 2nd ed.
Hilton—So well remembered. (Novel).
Hoffman—Freudianism and the literary mind.
Howell—A textbook of physiology for medical students and physicians.
Jones—Manual of surgical anatomy.
Kleiner—Human biochemistry.
Knode—Orienting the student in college.
McCulloch—Disinfection and sterilization.
McDowell—Handbook of physiology and biochemistry.
Major—Classic descriptions of disease. 3rd ed.
Matheson—Handbook of the mosquitoes of the North America. 2nd ed.
Moulton-ed.—The autobiography of science.
Murphy—Anemia in practice, pernicious anemia.
Olmstead—Francois Magendie, pioneer in experimental physiology and scientific medicine in the 19th century.
Organic syntheses. v. 25.
Piney & Wyard—Clinical atlas of blood diseases.
Ratcliff—Science yearbook of 1945.
Schaeffer—The nose, paranasal sinuses, nasolacrimal passageways, and olfactory organ in man. 1920.
Smith—The physiology of the newborn infant.
Stafford—Boston adventure (A novel).
Steiner—Where do people take their troubles?
Thornton—The social component in medical care.
Treves—Surgical applied anatomy. 8th ed.
Tuleen—Prepare yourself.
Weil—Textbook of neuropathology.
Wharton—Gynecology with a section on female urology.
Wright—The nose and throat in medical history.
Wyatt—Chronic arthritis and rheumatoid affections with recovery record.

Wanted—

Physician to practice in Stafford County, Virginia. Population 10,000. Only one physician in county. Will offer financial aid to establish. Write to E. L. C. Derrick, Secretary, Public Health Association, Stafford, Va. (*Adv.*)

Wanted—

Resident physician—single. Preferably with experience in tuberculosis, but not required. 230-bed tuberculosis sanatorium, located in Richmond. Liberal salary. Complete maintenance. Apply Medical Director, Pine Camp Hospital, Richmond 22, Va.—(*Adv.*)

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Wanted—

An associate in general practice and operation of small hospital. Address J. Paul Kent, M.D., Altavista, Va. (*Adv.*)

Wanted—

Laboratory Technician for Internist. Apply to Drs. Alexander and Mewborne, 403 Medical Arts Building, Newport News, Va. (*Adv.*)

Wanted—

Location with paying practice. Eastern Shore section preferred. Would appreciate any information. Address "X.Y.Z." care this journal, 1200 East Clay Street, Richmond 19, Va.—*(Adv.)*

Established Hospital for Lease.

A Sanatorium for nervous, mental, alcoholic and drug cases, doing an excellent business, to a reputable physician or medical group. Dr. E. W. Stokes, 923 Cherokee Road, Louisville 4, Kentucky. (*Adv.*)

Obituaries

Dr. Frank Cyrus McCue,

Well known physician of Charlottesville, died December 1st. He was seventy-two years of age and received his medical degree from the University of Virginia in 1898. Dr. McCue had practiced in Charlottesville for more than forty years and was at one time superintendent of the Martha Jefferson Hospital. He was for sixteen years secretary-treasurer of the Albemarle County Medical Society and had been a member of the Medical Society of Virginia for forty-five years. His wife and three children survive him.

Dr. Edward McCarthy,

Retired Richmond physician, died November 29th after an illness of two weeks. He was eighty-five years of age and graduated from the Medical College of Virginia in 1881. Dr. McCarthy was a member of the Medical Society of Virginia. His wife and four children survive him.

Dr. Archibald McDowell Burfoot,

Prominent Norfolk County physician, died at his home in Fentress on November 25th after an illness of five years. He was a native of North Carolina and sixty-one years of age. Dr. Burfoot graduated from the former Baltimore Medical College in 1906 and had practiced in Fentress for thirty-seven years. He was a past president of the Seaboard Medical Association of Virginia and North Carolina, and had been a member of the Medical Society of Virginia since 1907. His wife and two daughters survive him.

Dr. Casper Otto Miller,

Retired physician and business man of New Market, died unexpectedly on December 16th, at the age of 88 years. He was graduated from the University of Virginia in medicine in 1880 and from the University of New York in 1881, later studying abroad. He had been a member of the Medical Society of Virginia for many years, served one term in the Virginia House of Delegates, was a worker for the establishment of Shenandoah National Park, a writer, and active in the Lutheran Church. His wife and three sons, one of them Dr. James A. Miller, of Winchester, survive him.

Dr. Everett A. Land,

For many years a prominent physician and specialist of Norfolk, died suddenly on October 30, of a heart attack. He was born in the County of Norfolk in 1880 and had spent his whole life in this vicinity. He was the son of the late William J. and Margaret Bunting Land.

He attended private schools and graduated from the Norfolk Academy. Deciding upon a career of medicine, he entered the University College of Medicine, Richmond, graduating as a Doctor of Medicine in 1906. He served his internship at Sarah Leigh Hospital in Norfolk, and the Brooklyn Eye, Ear, Nose and Throat Hospital. Returning to Norfolk, he began the practice of his specialty in 1909 and continued until his death.

He was a member of Norfolk County Medical Society, Medical Society of Virginia, American Medical Association, Seaboard Medical Society, and a fellow of the American Opthalmological Society and American College of Surgeons.

We wish to express deep sympathy and sorrow to his family.

COMMITTEE { H. HARRISON
H. M. DOLES
S. H. GRAVES

In the City of Baqdad lived Hakeem, the Wise One, and many people went to him for counsel, which he gave freely to all, asking nothing in return.

There came to him a young man, who had spent much but got little, and said: "Tell me, Wise One, what shall I do to receive the most for that which I spend?"

Hakeem answered: "A thing that is bought or sold has no value unless it contains that which cannot be bought or sold. Look for the Priceless Ingredient."

"But what is this Priceless Ingredient?" asked the young man.

Spoke then the Wise One: "My son, the Priceless Ingredient of every product in the market-place is the Honor and Integrity of him who makes it. Consider his name before you buy."

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BOOK ANNOUNCEMENTS

Diet Manual. Medical College of Virginia Clinics, Richmond. Commonwealth of Virginia, Division of Purchase and Printing, Richmond, 1945. 39 pages. Price 25 cents.

This booklet contains basic diets as used in the Medical College of Virginia clinics and was compiled for the use of all those concerned with the nutritional welfare of the patient.

Men Under Stress. By ROY R. GRINKER, LT. COL. M. C., and JOHN P. SPIEGEL, MAJOR, M. C., Army Air Forces. 1945. Blakiston, Philadelphia. xii-484 pages. Cloth. Price $5.00.

Men Under Stress is a discussion of the psychoneuroses of combat fliers and the treatment, especially by narcosynthesis. This consists of injecting a 2.5 to 5 per cent solution of pentothal intravenously, from 0.3 to 0.5 Gm., to produce a somnolent state in which the patient will answer questions or even talk spontaneously. It is used on those patients who consciously or unconsciously refuse to divulge repressed emotions to the Flight Surgeon. The common tendency of the patient in this condition again to live through a dramatic incident is amazing. "The terror exhibited in moments of supreme danger, such as during explosions within the plane, the falling of a plane, the mutilation or death of a friend before the flier's eyes, is electrifying to watch. As the event approaches, the body becomes increasingly tense and rigid. The eyes widen and the pupils dilate, while the skin becomes covered with fine perspiration. The hands move about convulsively, seeking a support, a protection, a weapon or a friend to share the danger. Breathing becomes incredibly rapid and shallow. The intensity of the emotion sometimes becomes more than can be borne and frequently at the height of the abreaction, there is a collapse. The individual falls back in bed and remains quiet for a few moments, usually to resume the story at a more neutral point."

The book consists of many detailed case histories of men with combat fatigue, and the effects of psychotherapy. The results are amazingly good. The authors state that many men who succumbed to the strain had poor home training; they were inclined to be spoiled by their mothers, dominated by their fathers, and often had a far more intense emotional attachment to their mothers than their age should permit. This probably results from the modern tendency to excessive gratification of children and unwillingness to instill mature standards of conduct. "A happy combination of gratification and frustration prepares a boy to endure successfully later stress and deprivation." Symptoms arising when men reached their breaking point included especially restlessness, irritability, aggression, fatigue, insomnia, anxiety, emesis, and paralysis. Gastrointestinal complaints were more common than cardiac neuroses." Those men whose duties while flying involved the least amount of continuous work, were most susceptible to the cumulative effect of fear.

This book should be read by all physicians who expect to deal with returned veterans. It is well written, and is an important contribution to psychiatry. It is painfully obvious, however, that psychiatry is still in an embryonic state, comparable to the position of natural history to the analytical sciences, for all is description without measurement. What this field badly needs is accurate data, such as blood pressure, excretion of 17-ketosteroids, brain waves, and other measurements of the physiologic disturbances involved. R.J.M.

Penicillin Shortage Explained.

The shortage of penicillin for injection, which is causing resentment among physicians unable to secure this product for serious cases of disease, is due to "strikes, difficulty in maintaining production because of contamination during fermentation, increased export, the use of poor quality corn steep liquor and the manufacture of penicillin mixtures," according to the November 24 issue of *The Journal of the American Medical Association.*

The editorial stated that "steps are being taken to overcome the penicillin shortage. Export controls have been suggested to permit records of the quantity of penicillin leaving the United States. Directives giving hospitals first call on penicillin production have also been proposed. A higher grade of corn steep liquor is being sought."

The editorial suggested that a "step which should be undertaken by the manufacturers until the present shortage is alleviated is the discontinuance of doubtfully acting mixtures. Penicillin for injection purposes is truly a life-saving measure and its distribution should be given priority over the manufacture and distribution of over-the-counter items of less value."

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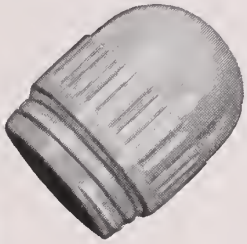

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Rachitic changes were present as late as the fourteenth year, and the incidence was higher among children dying from acute disease than in those dying of chronic disease.

The authors conclude, "We doubt if slight degrees of rickets, such as we found in many of our children, interfere with health and development, but our studies as a whole afford reason to prolong administration of vitamin D to the age limit of our study, the fourteenth year, and especially indicate the necessity to suspect and to take the necessary measures to guard against rickets in sick children."

*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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February 1946

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MAPHARSEN now entering its thirteenth year of active clinical use, has assumed a leading role among arsenical antisyphilitics. More than 150,000,000 doses of MAPHARSEN have been used clinically during the past five years with a minimum of reaction and maximum of therapeutic effect.

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AN INVESTIGATION OF ALLERGY IN ROUTINE NOSE AND THROAT PRACTICE: A REPORT OF ONE HUNDRED PRIVATE CASES*

FRED E. HAMLIN, M.D.,
Roanoke, Virginia.

Many more years of scientific investigation will be necessary before all the etiologic factors concerned in allergy will be known and their significance understood.

During the past fifteen years extensive investigations of the problem of allergy have been made in this country and abroad. Much has been learned but there are a great number in our profession who remain skeptical about the subject. As knowledge of allergy increases, the importance of an early diagnosis by the otolaryngologist is becoming more and more impressive.

In this report of one hundred cases of allergy I wish to show some of the symptoms and complications found every day in the private practice of otolaryngology. I do not make any attempt to treat allergic patients other than local treatment and symptomatic relief, so these patients who were seen in the office were referred to the various men who were doing allergy. In most cases the patient requested his family doctor, therefore there was no standardized form of treatment.

The clinical diagnosis of allergy is based upon the history, including the hereditary background and the personal allergic manifestations. A hereditary tendency to any of the allergic diseases complicates the problem and usually demands more careful and prolonged treatment than the acquired form. The cycle often runs thus: in infancy, colic and eczema; in the older child, intestinal disturbances, hay fever or repeated colds; in the adult, hives, asthma, sinusitis with or without polyp formation, colitis or migraine.

Allergy is a complicating factor very frequently encountered in the practice of otolaryngology. Almost half of the cases of nasal allergy can be satisfactorily managed by the avoidance of the offending allergens or desensitization to them. In another group good results can be obtained by local treatment plus allergic management.

The nasal manifestations of allergy are characterized by sneezing, itching, obstruction, discharge and diminished sense of smell. The gross pathology of the mucous membrane of the nose is chiefly one of edema with marked pallor, and usually covered with glistening secretion. The degree of the pallor and edema is dependent upon the allergic reactions and at times the mucous membrane may appear to be normal. If the allergic reactions are continuous the changes in the mucous membrane become more marked.

The edema is usually more marked on the inferior surfaces of the middle turbinates, the anterior end of the inferior turbinates, and the posterior tips of the inferior turbinates. The tissue in the middle meati is usually edematous, making it impossible to see the maxillary ostia with the nasopharyngoscope. Polyps are frequently seen around the middle turbinates. The size of the polyps varies according to the allergic reaction and duration of the offending allergen. Sometimes during allergic treatment polyps will entirely disappear only to return again during an acute exacerbation. An acute infection may also produce an increase in the amount of the edema, but the symptomatology and cytology of the secretions will usually give a differential diagnosis.

In allergic rhinitis the age of onset varies considerably although it may occur at any age. In this group there was a marked variation as to the time of onset, namely, from infancy to age 77, and noted in 37 males and 63 females. Heredity is undoubtedly

*Read at the annual meeting of the Medical Society of Virginia in Richmond, October 23-25, 1944.
Candidate's acceptance thesis: American Laryngological, Rhinological and Otological Society.

the most important predisposing factor. Of the 100 examined a positive history of allergy was obtained from 12 males and 28 females.

Several others gave a doubtful history. A comprehensive and painstaking history is essential in order to get a clearer understanding of the patient's illness. The family history is only confirmatory in establishing a probable allergic etiology. Many children have allergy and are treated for recurrent colds. After this treatment is exhausted they are then taken to the otolaryngologist for the removal of the tonsils and adenoids. If the operation is performed, a poor result will usually follow.

Sex seems to have no influence since, according to most authors, males and females are affected in the same ratio. From my observations, however, I note a decided difference in the infrequency of allergic rhinitis in the colored race, especially in the extremely dark type.

As a rule, patients consult the otolaryngologist for relief of a stuffy nose, post-nasal drip, headache or cough, rather than because they suspect allergy. The chief complaints as given by the patients on their first visit to the office were recorded as follows:

TABLE I

	Cases
Watery discharge from nose	13
Stuffy nose	37
Headache and dizziness	16
Hoarseness	8
Deafness	5
Tinnitus	5
Sore throat	4
Asthma	3
Constant colds	8
Earache with headache	1
Total	100

Kuhn and Linton[1] observed 3,657 consecutive cases in an eye, ear, nose and throat practice. Of this group 19 per cent gave ear complaints, 16 per cent consulted them on account of throat symptoms and 20 per cent came on account of nasal symptoms.

In a review of 720 nasal cases they found 19.4 per cent had primary nasal allergy. In reviewing their result 47 per cent were satisfactory by allergic management alone (avoidance and desensitization) and 27 per cent were satisfactory by allergic management plus local treatment.

Agar and Cazort[2] are of the opinion clinical allergy must be considered in 40 per cent of the patients who enter their reception room. To this I fully agree although it is difficult to have 40 per cent of my patients tested for allergy when their symptoms at times are slight. The recognition of the allergic manifestation is often made in the process of a routine ear, nose and throat examination when the patient comes to the office to see about a tonsillectomy. Agar and Cazort in their observations on the incidence of deflected septa and polypi in asthma and seasonal hay fever, are in accord with Smith[3] who observed deflected septa in 22 per cent and polypi in 9 per cent of 500 asthmatics.

How many persons have allergy? Vaughan[4] states it has been estimated that fully 10 per cent of the population of this country suffer from some form of allergy. Up to 2 per cent may have hay fever alone. About 65 per cent of all hay fever victims may later develop asthma. Probably three million persons in the United States are suffering from hay fever and asthma alone.

Quoting Vaughan[5]: "Local nasal surgery is not indicated in cases of extrinsic asthma without preliminary allergic study. In spite of this I find that two-thirds of my series that had previously been operated upon were extrinsic cases. Surgery did not relieve them and they should not have been operated upon."

Of the group of cases investigated, operations had been performed prior to the first visit to the office as follows:

TABLE II

	Cases
Tonsillectomy	62
Submucous resection	10
Caldwell-Luc	1
Window (Subturbinal)	1
Turbinectomy	6
Polyps (Removed)	5

We are all in accord with Mullin[6] that allergy presents an increasingly perplexing problem which requires combined study by the otolaryngologist and the internist and the utmost cooperation on the part of the patient. The otolaryngologist should possess a general knowledge of the manifestations of allergy and close cooperation with the allergist would be of mutual benefit.

In an excellent paper Woodward and Swineford[7] of the University of Virginia have shown the value of a close collaboration between the allergist and rhinologist, giving in detail a report of 128 con-

secutive private cases. In 61 there were no special complications. The remaining 67 showed the following: obstruction from the septum or turbinates, 25; obstruction from nasal polyps, 16; pansinusitis, 9; acute and subacute maxillary sinusitis, 11; and septal or turbinal obstruction without secondary infection, 4.

In a routine rhinologic examination diagnostic classification was made thusly:

TABLE III—VASOMOTOR RHINITIS

	Cases
Obstruction from polyps	9
Deflected septa	16
Pansinusitis	9
Sphenoiditis	2
Ethmoid sinusitis	17
Chronic maxillary sinusitis	10
Acute and subacute maxillary sinusitis	7
Negligible complications	39

Ofttimes a patient will come into the office complaining of post-nasal drip and a severe cough. On nasopharyngoscopic examination the posterior tips of the inferior turbinates will be edematous and seem to be dripping with mucus. I have found local medication to be of very little value in this type of case. This is what Carmody and Greene[8] call "local tissue dropsy". They believe "that the nasal mucous membrane which is normal is resistant and nonfilterable to outside protein invasion, but it becomes, after greater or less period of abuse, due to faulty metabolism of protein from focal infection or faulty tissue chemistry, a spongy hypertrophied dropsical tissue, threaded with dilated capillaries, which give us our symptoms of so-called 'hay fever'. This membrane is now potentially a pathologic tissue and readily permeable to pollen proteins."

The allergens to which these cases were skin sensitive are classified as follows:

TABLE IV

	Cases
Epidermals	36
Foods	34
Pollens	13
Bacteria	17
	100

In my group of cases I performed the following operations after the diagnosis of allergic rhinitis was made:

TABLE V

	Cases
Tonsillectomy	14
Submucous resection	4
Caldwell-Luc	2
Window (Subturbinal)	2
Turbinectomy	4
Polyps (Removed)	6

Hansel[9] has stated that he found it necessary to do nasal surgery in only 25 out of 220 cases of nasal allergy.

Vaughan[10] advocates that allergic rhinitis should be treated as follows:

"1. In general, allergic therapy should be tried first even in the presence of obvious sinus infection.

"2. Sinus infection should be treated locally, with or without surgery, on its own merits, in the same way that a similar infection should be treated in a nonallergic individual."

Vaughan once told me he preferred getting the allergic patient before the rhinologist started cutting on the nose. I have always remembered this and of the many patients he has treated for me, only once has it been necessary for a submucous resection before good results were obtained.

Piness and Miller[11] specifically state we see too many children who have been treated for repeated "colds", chronic sinusitis, chronic bronchitis by "cold shots", when allergy is the essential cause. They are of the opinion there is less reason for failing to recognize allergic pathologic changes in the nose and throat than there is for failing to recognize allergic symptoms.

Many patients consult the otolaryngologist about ulcers in the mouth. Often it is aphthous stomatitis, more popularly called canker sores. Clarke[12] believes this type of stomatitis is allergic in origin and can be prevented and cured by finding out the offending protein and removing it from the diet.

Singleton,[13] quoting Hansel and Chang, in a study of the relation of allergy and tonsillectomy in children, made the following observations:

1. In the management of frequent colds, sinusitis, bronchitis and recurrent pneumonia the possibility of allergy as an etiologic factor must always be considered.

2. Of 200 children considered as a routine for removal of the tonsils and adenoids because of these complaints, a definite diagnosis of nasal allergy was established in 26, or 13 per cent. It is significant that 6 of these patients had hay fever.

Gatewood[14] decides that interference with the physiologic function of the gastrointestinal tract fre-

quently sets up a toxic condition in the lower part of the bowel which causes it to become a reservoir for infection, later to be conveyed by the lymphatics and vascular systems to distant parts of the body. He is of the opinion persistent post-nasal drip, vertigo, rhinorrhea and dryness and stuffiness of the nose can be secondary to an intestinal tract disturbance in the absence of any causative factor in the ear, nose and throat.

Headache is often complained of by patients and they seek the advice of a "head specialist" for relief. Rinkel[15] reports on a study of headache due to allergy and classifies them as follows: the migraine type, a type which is associated with nasal allergy and sinusitis; and a type which is due to a general allergic reaction.

Out of this group of patients only five came into the office complaining of deafness. An audiometer examination was made on all patients diagnosed allergic rhinitis, using 2-A audiometer. Deductions will have to be made, as the examinations were made in an office reasonably free from street noises but not in a soundproof room. The average hearing loss for speech in the 37 males was right ear 20 per cent and left ear 22½ per cent, while in the females the loss was right ear 25 per cent and left ear 27 per cent.

One would expect a certain amount of deafness to be present due to the general edema of the nasal mucous membrane encroaching upon the mouth of the eustachian tube.

Chun-Yue Mao[16] examined 535 deafened children. Fifty-three per cent were biologically deafened while 47 per cent were pathologically deafened, and 28.6 per cent of the biologically deafened showed a positive reaction in the scratch or the intracutaneous test for allergy. By the same method, the pathologically deafened showed 28.5 per cent positive reaction. The incidence of allergy in the deafened children in his group was 27.44 per cent higher than for the largest numerical group of children with normal hearing reported. He believes there is definite evidence to indicate a higher percentage of allergic reactions in deafened children than in children with normal hearing.

In a survey of the audiometer records of 500 normal individuals, Lawrence[17] reports a marked variation in hearing ability as determined by that method of measurement, and is of the opinion that this variation indicates the hearing acuity is less influenced by training or vocation than by the nutritional level of the individual. In his conclusions he shows 14 out of 19 cases, or 73.6 per cent, improved after treating the metabolic derangement associated with the deafness by the administration of an extract of the endocrine gland at fault.

Schenck[18] believes we would expect tinnitus and a sense of full feeling in the ears or even some impairment of hearing as the result of allergic reactions in the mucosa of the eustachian tube. But when we find numerous eosinophiles in the discharge from the middle ear following pain, fever and spontaneous rupture of the tympanic membrane, it is necessary to consider seriously the effects of allergy in the middle ear.

X-ray study of the maxillary sinuses during an allergic attack has been of little value to me. The thickened membrane causing an opacity usually subsides after the allergic attack, providing the duration is not prolonged. Proetz[19] has shown that cloudy sinuses may be due to allergic swelling or polypoid degeneration of the mucous membrane.

Hansel[20] emphasizes the value of cytologic examinations of the nasal and sinus secretions as an aid in the differential diagnosis of allergy and an acute nasal infection. He instructs his patients to blow their noses on a piece of waxed paper and then examines the discharge for eosinophiles.

Many authors have been enthusiastic about ionization in allergy and some favorable reports have been made. My experience with ionization has been so limited that I have failed to see any startling results. Duke[21] in his review of the literature on ionization, is of the opinion all of the present day literature is characterized by rather bold statements backed up by little published clinical, experimental, pathologic or immunologic data which can stand up under constructive review.

There is a close relationship in allergic rhinitis with a low metabolic rate and a slow pulse, and may not present any other symptoms of hypothyroidism. It was not possible to obtain a metabolic report on all cases. Of the 62 examined, males were minus 19 and plus 5; females were minus 31 and plus 2.

Quoting Hansel[22]: "The administration of thyroid extracts for the treatment of so-called vasomotor rhinitis has been employed for many years and many

reports have appeared in the literature on the relation of hypothyroidism or myxedema to the hypersensitive nose. A certain percentage of satisfactory results has been reported from the administration of thyroid. Many observers believe that hypothyroidism is the primary cause in many of these cases. A recent report on the relation of hyperthyroidism to vasomotor rhinitis by Forman, however, calls attention to the fact that patients with nasal allergy may or may not have evidence of hypothyroidism. He calls attention to the fact that a patient with nasal allergy may have a low basal metabolic rate and yet present no other signs of hypothyroidism. He, therefore, emphasizes the importance of a thorough clinical investigation of these patients to determine definitely whether a low basal metabolic rate indicates or proves that hypothyroidism is present. In those patients, therefore, who present the nasal manifestations of allergy with a definite, proved hypothyroidism, the administration of thyroid extracts may be an important adjunct in the treatment."

The following classification shows the progress of treatment and was obtained by personal contact and questionnaires:

TABLE VI

Satisfactory by allergic management (avoidance and desensitization)	45
Satisfactory by allergic management and local treatment	24
Satisfactory by allergic management plus surgery	17
Poor results (non-cooperative)	14

CONCLUSIONS

1. Early recognition of allergy by the otolaryngologist would be of economic value to the patient.

2. No doubt if the nasal condition in this group had been recognized as of allergic origin, better results could have been obtained, but little attention was paid to allergy when the majority of these patients were children.

3. Nasal pathology would require less surgery if we had more allergic investigation.

4. Deafness is a complicating factor in allergy.

5. The otolaryngologist should always keep in mind that his specialty is not isolated, but is closely allied to internal medicine, and good results are often obtained by eliminating systemic disturbances by means of close cooperation with the internist and patient.

REFERENCES

1. Kuhn, Hugh A., and Linton, Lloyd D.: Allergy in Relation to Otolaryngology, *Annals of Otology, Rhinology and Laryngology* **51**:162, March, 1942.
2. Agar, John S., and Cazort, Alan: Pathological Nasal Conditions Affecting Clinical Allergy, *Southern Medical Journal* **32**:1063-1067, October, 1929.
3. Smith, A. T.: Nasal Pathology Associated with Bronchial Asthma, *Penn. Medical Journal* **35**:607, 1932.
4. Vaughan, Warren T.: Allergy and Applied Immunology, Mosby, St. Louis, 1934, 2nd Edition.
5. Vaughan, Warren T.: Some Rhinologic Aspects of Allergy, *Journal of Allergy* **4**:127, January, 1933.
6. Mullin, W. V.: Interrelation of Allergy and Otolaryngology, *Archives Otolaryngology* **15**:413-417, March, 1932.
7. Woodward, Fletcher D., and Swineford, Oscar: Allergic Rhinitis, *Archives Otolaryngology* **34**:1123-1128 December, 1941.
8. Carmody, T. E., and Greene, L. W.: *Annals of Otology, Rhinology and Laryngology* **38**:759-762, September, 1929.
9. Hansel, French K.: Allergy of the Nose and Paranasal Sinuses.
10. Vaughan, Warren T.: Practice of Allergy, St. Louis, C. V. Mosby Company, 1939.
11. Piness, George, and Miller, Hyman: Allergy of the Upper Respiratory Tract in Infancy and Childhood, *Journal A.M.A.* **113**:734-737, August 26, 1939.
12. Clarke, T. Wood: Little Recognized Types of Allergy, *New York S. J. Med.* **37**:236, February 1, 1937.
13. Singleton, J. Dudley: Progress in Otolaryngology, *Archives Otolaryngology* **35**:652-665, April, 1942.
14. Gatewood, W. L.: Symptoms of Gastrointestinal Origin in the Ear, Nose and Throat, *Archives Otolaryngology* **33**:592-599, April, 1941.
15. Rinkel, H. J.: Headaches Due to Allergy, *Journal of Allergy* **5**:318, 1934.
16. Mao, Chun-Yue: Allergy as a Contributing Factor to Biologic Deafness, *Archives Otolaryngology* **35**: 582-586, April, 1942.
17. Lawrence, Chas. H.: Progressive Deafness. Endocrine Malfunction as an Important Etiological Factor: Its Incidence and Treatment *Laryngoscope* **36**: November, 1926.
18. Schenck, Harry P.: Otolaryngologic Aspects of Allergy, *Penn. Med. Journal,* May, 1940.
19. Proetz, A. W.: Sudden Allergic Reactions Localized in the Antrum, *Tr. Am. Laryn. Rhin. & Otol. Society* **39**:87, March, 1930.
20. Hansel, F. K.: Further Observations on the Cytology of the Nasal Secretions in Allergy, *J. Allergy* **10**:251, 1939.
21. Duke W. W.: Allergy as Related to Otolaryngology, *Archives of Otolaryngology* **20**:712-721, November, 1934.

22. Hansel, French K.: Allergy of the Nose and Paranasal Sinuses.

DISCUSSION

DR. W. RANDOLPH GRAHAM, Richmond: Allergic rhinitis, with its many complications, is unquestionably a very common disease. Therefore, as Dr. Hamlin has pointed out, its true nature should be more frequently recognized so that handicapping and ofttimes serious sequelae may be prevented. The ideal team for its detection is one composed of otolaryngologist, internist and allergist working in close cooperation, and, one might add, in close harmony.

The diagnosis of allergy in the nose, or elsewhere, for that matter, is not always easy. Unfortunately we have no single trustworthy test for allergy as we have for syphilis and certain other diseases. We do have certain presumptive *tests,* but for the most part diagnosis is a matter of clinical acumen. The following may serve as diagnostic criteria, but not infrequently several of these guides must be satisfied before the true state of affairs is ascertained: (1) allergic history; (2) typical or suggestive physical findings; (3) cytology of nasal secretion; (4) character and degree of skin reactions; (5) nature of nasal contact tests; (6) effect of epinephrine on subjective and objective symptoms; and (7) presence of polypi. Hansel has drawn attention to the similarity between the findings in bronchial asthma and allergic rhinitis.

In management, as in diagnosis, our same trio must continue to work together in order that the best interests of the patient may be served. Adequate desensitization plus avoidance of offending allergens should give prompt and satisfactory relief for a considerable number of these sufferers, but for optimum results the otolaryngologist must be called upon to remove obstructive processes, clear up intercurrent infection and prevent complications in the nose and accessory sinuses. The internist likewise frequently has an important role to play in correcting abnormal conditions that arise in other parts of the body and which may directly or indirectly affect the nose. Hypothyroidism is a typical example.

Like the late Dr. Warren T. Vaughan, I feel that far too many cases of extrinsic asthma and rhinitis have nasal surgery prescribed, and that many persons with even obvious sinus infection can be cured or at least benefited by adherence to a proper anti-allergic regime.

I have enjoyed Dr. Hamlin's paper very much and am in complete agreement with all its major premises.

DR. HAMLIN, closing the discussion: First, I wish to thank Dr. Graham for his kindness in discussing my paper.

I should like to suggest that the ear drum be examined before making a metabolism test. Recently I noticed an article in a medical journal mentioning that a metabolic test was made and the reading was plus 60. A repetition of the test gave the same reading. Upon examining the ear a large perforation was found in the drum. The ear canal was packed tightly with cotton and another test was made. At this time the reading was minus 8.

The present treatment of allergy is not perfect but it furnishes a splendid line of approach.

Floral Eponym (35)

SWIETENIA

GERHARD VAN SWIETEN, 1700-1772

Swietenia is a species of tropical American trees of the family Meliaceae. The best known is S. mahógoni which is the mahogony of commerce.

Gerhard van Swieten was the favorite pupil of Boerhaave, the great Dutch clinician. He went to Vienna as court physician to Maria Theresa, where he had much to do with the rise of the old Vienna school which he reorganized after the Leyden pattern. As prefect of the Imperial Library at Vienna he raised it to first rank. How he became the Empress's physician is an interesting story. The Archduchess Maria Anna, the Empress's sister, was visiting in Brussels when she gave birth to a stillborn baby. Van Swieten was called in consultation. The Empress was so impressed by his obstetrical knowledge that she consulted him for her sterility. His advice was so excellent that in due time she had sixteen successive pregnancies.

PROPHYLAXIS AGAINST CERVICAL MALIGNANCY

J. W. KENNEDY, M.D., F.A.C.S.,
Philadelphia 3, Pennsylvania.

There is no organ in the entire gynecological field which is so subject to malignancy as the uterus. The liability of the uterus to malignant neoplasia is associated with certain factors which are peculiar to the organ.

The metabolic changes of different degrees occur in all organs, but the size and structure of most organs in the adult remain more or less constant. This is not true in the uterus where almost constant structural changes are taking place. Such changes are accompanied by an imbalance of epithelial and other structural elements. This constant unstable structural equilibrium is prevalent and predisposes the organ to malignant cell dedifferentiation; therefore, throughout adult life the epithelia and stroma elements of the endometrium are in a constant state of structural change or transition during various phases of the menstrual cycle. Further, at the menopause, during pregnancy and in the puerperium gross changes occur in size, vascularity and epithelial elements of the organ. These mutations plus the liability of the cervix to trauma of labor, too often followed by chronic infection and irritation, all provide a fertile field for malignancy.

We would suggest the term cervical erosion be changed to pseudo-adenoma of the cervix with the thought the same would place the condition in the field of tumors. This might add greater importance to the lesion which so often leads to malignancy. At least the change in nomenclature might have a psychological stimulating effect toward better prophylaxis against later malignancy.

We cannot have continued epithelial imbalance over long periods of time without cellular transition to dedifferentiation which is followed by a more embryonic type of cells seen in histological picture of carcinoma.

It should be kept in mind that the extent of cervical involvement cannot be estimated by external examination, nor is the location of cervical involvement of malignancy sufficiently defined in its outline for us to say removal of any special area for purpose of biopsy is an assurance that no malignancy exists in the remaining nine-tenths of cervical structure.

In no sense are we stressing the frailties of biopsy revelations. We believe in the same, but we are forced to discuss the relative values which present themselves in the attempts at salvation of a sterile uterus which so kindly lends itself to complete extirpation. What is the value of the sterile uterus, what is the percentage of errors in diagnostic means of investigation, what is the cost (mortality and morbidity) of removal of the sterile uterus? On account of our discussion of relative values in its relation to value of the uterus, its price of removal (mortality and morbidity) and the possibilities of errors in diagnosis by biopsy or other means, we have been accused of being a laboratory nihilist. This is untrue in every particular.

We have said in literature a number of times that we do not question the value of biopsy; the laboratory is not in the balance for refutation, but superlative degrees of dependence must not be placed on ultra-refinements of histopathology and specially is this so when complete extirpation of the sterile organ can be performed with a mortality of one or a fraction of one per cent by vaginal hysterectomy clamp method. Such results must be compared with the percentage of errors by any means of diagnosis. Is the laboratory correct in ninety-nine per cent of examinations? It must be so to ccmpete with the low death rate in the removal of a sterile organ followed by a splendid postoperative history. This is what we mean by relative values and is in no way a denial of the value of the laboratory. The world's best pathologists are calling our attention constantly to the relation of childbearing followed by injuries of the cervix and the influence of such trauma on later malignancy.

The gynecological profession has been tardy to a profound degree in accepting the teaching of the pathologists that the abused cervix means later malignancy in an incriminating degree of cases. The surgical treatment of the malignant uterus or the surgical treatment of prevention of the same practically received its death blow when radium came to the front. Thank Providence today there is an effort being made to resurrect the surgical treatment of the malignant uterus.

For sixty-five years, we, in the Joseph Price Hos-

pital, have never wavered in our views of prevention and treatment of the malignant uterus. We have received a very ignoble amount of criticism for our stand, but today we are rewarded by a regeneration of the surgical treatment of uterine malignancy.

In regard to prevention and cure of the malignant uterus our profession has shown an indifference which amounts to personal carelessness and profound neglect in their analysis of cause and effect in regard to injury and pathologic conditions of the cervix as predisposing causes of later malignancy.

The message of this discussion is just this: prevent the abused cervix and we save ninety-five per cent of the patients who will later die from the malignant uterus.

Dr. Cashman, of Pittsburgh, reports ten thousand patients who have been treated for symptomatic cervix by cautery with but two later cases of malignancy.

In the work of the late Joseph Price plus my work extending over sixty-five years of gynecology, neither of us has had a single case of cervical malignancy following our repairs of the organ.

How much more evidence of prophylaxis against malignancy of the cervix does the profession demand before they are awakened from this chrysalis stage of thinking and action? In our experience in ninety-five per cent of our patients of malignancy of the uterus, the cervix was involved, and practically all of these patients had borne children. Certainly there is no thought that more challenges us to return the cervix to its normal outline and relation to other pelvic structures. This can be done in practically every instance by proper deep repair of the cervix. If the profession has failed in the proper repair of the cervix and thereby failed to prevent later malignancy of the organ, it is a personal matter and not a failure of cause and effect. This is true as far as our experience goes.

We have said that repair of the cervix is a lost art and has almost completely disappeared from our clinics. We feel the fault has been that the repairs have been too superficial and, further, absorbable sutures have failed to produce union of the cervical tissues which are slow to repair. We use no absorbable sutures; all repairs are performed by the use of silkworm-gut. We have fully illustrated and discussed this work in a monograph on vaginal hysterectomy.

In regard to the relation of the abused cervix to later malignancy, there is nothing obscure in the relation here of cause and effect. There is no necessity for us to deal in platitudes when facts are a life's experience. There is no greater exhibition of neglect in all surgery or medicine to my knowledge than that seen in the everyday indifference shown by our profession, than that revealed in the opportunity to prevent malignancy of the uterus by repair of the cervix or other means which have given splendid results in the hands of others. Further confirmation of this thought is the precept, there is no organ in the male or female where prevention of malignancy can so uniformly be accomplished, nor is there any organ in male or female where early malignancy can so uniformly be cured as that of the uterus by removal of the organ by vaginal hysterectomy clamp method, preceded by proper use of the cautery.

We have no intention to discuss the operation, as such has been completely illustrated and discussed elsewhere. In this paper we have purposely dealt largely with the cervical malignancy following neglected injuries incident to childbearing. However, the same message applies to all pathological conditions of the cervix which lead to later cellular dedifferentiation.

In regard to prevention and treatment of malignancy of the uterus, the profession must march as a solid phalanx, first, to prevention by the means discussed of the abused cervix; next, the removal of the sterile symptomatic uterus on the earliest date possible in practically all cases, and, finally, the recognition of malignancy by any and all means in the sterile uterus must approach ninety-nine per cent of accuracy, ere such can be accepted as the total extirpation of the organ has no greater mortality.

The last word in prevention and treatment of malignancy will not be irradiation, but will be early surgery in all glandular organs which permit removal.

241 N. 18th Street.

SAMUEL THOMSON, PATENTEE, AND THE THOMSONIAN SYSTEM

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In his own hand, Dr. John Richards wrote on the fly leaf of the tenth edition of Samuel Thomson's "New Guide to Health or Botanic Family Physician" *John Richards Right Patent, Price $20.00. Perry Park, Sept. 15, 1834.* Dr. Richards' great-granddaughter gave the writer this small volume and two companion volumes relating to the Thomsonian system. These three books aroused my interest in Samuel Thomson, and the Thomsonian doctors who were plentiful in Virginia during the past century. This brief account is presented as a historical review of a fad, which, though accepted by many, was eventually rejected, but not without having for a time enjoyed considerable popularity among the people and not a few medical men of influence in America.

Samuel Thomson was born at Alstead, Cheshire County, New Hampshire, on February 9, 1769. His father was a pioneer in the state. Samuel related that he had his first medical experience when he was four years old. He ate lobelia, which is the same plant commonly known as Indian tobacco in Virginia. He proudly claimed this as his own discovery. His subsequent knowledge of herbs he gained from an old herb woman. When he was sixteen he made application to a Dr. Fuller, a root doctor, and was refused because of inadequate learning. He was not thwarted in his desire to know more about native herbs, which he used himself through the years. This part of his life he spent on his farm near Alstead, which had been given him by his father, and here he prepared many concoctions, which he took himself to know the effect.

He found a stimulus to begin practice in his own family. He related in his book that his wife recovered under his own ministrations after having had eighteen postpartum convulsions, discharging seven physicians, securing the aid of two root doctors and other assistance. Thoughtfully, he added, his farm work was well behind and the expense incurred was more than two hundred dollars. Fishbein notes that Andrew Still, the founder of osteopathy, fell for manipulations when one of his own children recovered under his ministrations. Thomson wrote that these successes and the distrust of the regular physicians led him into practice. He began by travelling through New Hampshire, Vermont, Maine and Massachusetts. His story is well written and interesting. The authorities on one occasion had him arrested on the charge of murdering a patient. The patient had been given a dose of his favorite lobelia. He was put in jail, brought to trial and dismissed. He finally settled at Beverly, Mass.

He was militant in his attitude to the regular physicians, whom he spoke of as the medical faculty. His main objection to these men and their practice arose from the general use of mineral drugs—mercury, arsenic and salt petre. The use of opium, he regarded as dangerous. "Pain is caused by disease and there is no other way to relieve it but by removing the cause." In many tilts with the medical faculty, according to his story, he was successful, until he began litigations and then he admitted frankly, "Most of those of the learned professions have become active opponents."

In 1813, he secured patents for his system of botanic medicine. Dr. Samuel L. Mitchill, prominent New York physician, backer of Robert Fulton, Congressman from New York and a versatile gentleman, aided him in securing these patents. The help given must not be over emphasized. Dr. Mitchill supplied for him the proper names of the drugs, or crude herbs, as accepted in the current materia medica, an act of kindness which no politician could have refused. He secured a second patent on January 28, 1823. He denied that "he wished to monopalize but to get government protection against the machinations of enemies." His honesty and forthrightness are convincing. He sold these patents to individuals for twenty dollars. To anyone who desired to practice the system, he sold the rights for one hundred dollars and gave them the benefit of personal aid, and his books. Certainly the price asked was not too much for thirty years of herb eating and the experience had during those years. "I have endeavored to convince by demonstrating the truth."

"There is one thing I think cannot be a matter of doubt—that I have been the cause of awakening a

spirit of inquiry among the people of this country." It is a matter of conjecture that he had any influence on scientific medicine. He wrote further that the abuse of a Mr. Whitlaw, by the medical profession, "is the best evidence of its (steam) utility. It gives me much pleasure to think that I have been instrumental in introducing a new system of medical practice—by relieving in a great measure the sum of human misery."

THE SYSTEM

"NUMBER ONE: To cleanse the stomach, overpower the cold and promote free perspiration. Emetic herb: Lobelia Inflata of Linnaeus.

"The most important article made use of in my system of practice, without which it would be incomplete, and the medical virtues of which, and the administering it in curing disease, I claim as my own discovery.

"NUMBER TWO: To retain the internal vital heat of the system and cause a free perspiration. Cayenne-Capsicum.

"I never had any knowledge of cayenne being useful as a medicine or that it had been used as such until I discovered it by accident.

"NUMBER THREE: To scour the stomach and bowels and remove the canker.

Bayberry or candleberry—a species of myrtle.
White pond lilly—the root.
Hemlock—the inner bark.
Marsh rosemary—the root
Sumack—bark, leaves and berries.
Witchazle—the leaves.
Red raspberry—the leaves.
Equan weed—Indian name cocash.

"NUMBER FOUR: Bitters to correct the bile and restore digestions.

Bitter herb, barberry, and popular bark.
Bitter root, golden seal.

"NUMBER FIVE: Syrup for dysentery to strengthen the stomach and bowels and restore weak patients.

Peach meats.
Cherry stones.

"NUMBER SIX: Rheumatic drops to remove pain, prevent motification, and promote a natural heat.

Gum myrrh.
Spts. Turpentine
Gum Camphur.

"NERVE POWDERS: American Valerian or Ladies slipper, sometimes called umbil or male and female nervine."

These are classed as the important "vegetables" made use of in the system of practice. In addition Thomson mentioned the use of spearmint, peppermint, pennyroyal, summer savory, hoarhound, elecampane, may weed, wormwood, tanzy, camomile, bitter sweet, mullen, burdock, skunk-cabbage, wakeribin, thoroughwort, featherfew, clivers, black birch bark, evan root, slippery elm bark, balsam fir, ginseng, snake root, mustard, horse-radish, balm of gilead, butternut, blue and white nervine, pipsissewa, goldenrod, meadow fern, yellow dock, prickly ash, bitter thistle and archangel.

In detail he advises in his book which drugs should be given, how the crude drugs should be prepared and combinations of the several numbers to get certain results. They constitute in all a most remarkable empirical system of medical treatment.

MIDWIFERY

"Conclusions as long experience and much solicitude has enabled me to form, concerning those who are suffering, and are constantly liable to suffer from the erroneous and most unnatural practice of the present day. The practice of midwifery, at this time (1834) appears to be altogether a matter of speculation with the medical faculty by their exhorbitant price for attendance. The tax on the poor class is very heavy and this is not the greatest grievance that they have to bear, for they are often deprived of their wives and children by such ignorant and unnatural practice as is very common in all parts of the country.

"Thirty years ago the practice of midwifery was principally in the hands of experienced women, who had no difficulty; and there was scarce an instance known in those days of a woman dying in the childbed, and it was very uncommon for them to lose a child; but, at the present time, these things are so common that it is hardly talked about. There must be some cause for this difference, and I cannot account for it in any other way than by the improper treatment they experience from the doctors, who have now got most of the practice into their own hands. In the country where I was born, and where I brought up a family of children, there was no such thing thought of as a doctor; a midwife was all that was thought necessary, and the instances were very

rare that they were not successful, for they used no art; but, affording such assistance as nature required, gave herb tea to keep them in a perspiration and to quiet the nerves.

"All the valuable instruction I ever received, was from a woman in the town where I lived; who had practiced as a midwife for twenty years; in an interview of about twenty minutes, she gave me more useful instruction than all I ever gained from any other source".

PUBLICATIONS AND SOCIETIES

The New Guide to Health or Botanic Family Physician containing a complete System of Practice was published in thirteen editions, the first appearing in 1822. The last edition of this book appeared in the name of a son, John Thomson. A narrative of the Life and Medical Discoveries of Samuel Thomson had appeared in ten editions by 1835. Samuel Robinson's Lectures on Medical Botany denominated Thomson's New Theory of Medical Practice, delivered in Cincinnati, Ohio, was published in 1835. These three volumes, which came into my possession were the property of Dr. John Richards.

In 1832, Dr. Thomas Hersey began publication of the Thomsonian Recorder. The first National Convention was held in Columbus, Ohio. In 1838, the Convention resulted in a split, which brought about the organization of the followers of Thomson into the United States Thomsonian Society. Alva Curtis, of Ohio, led the opposing faction into the Independent Thomsonian Botanic Society.

Thus, the last years of Samuel Thomson were embittered by controversies among his own followers. His sons were arrayed against him, and when he refused to follow them, they organized the "Eclectic School". Samuel Thomson died in 1843 The rest of the story is that of that branch of medicine today known in this country as the Eclectic. It was reduced to one school in Cincinnati in 1925, with a complete enrollment of one hundred and forty-eight students and thirty-eight graduates. There were at one time nine schools, scattered through the country.

THOMSONIANS IN VIRGINIA

It seems that Virginia has always shared in the fads and quackeries of each generation. At one time there were reported to be near fifty practitioners of the Thomsonian System. While many of these were purchasers of the "Rights", some were medical men who for one reason or another also took out the "Rights". In nearly every county there were one or more Thomsonian doctors during the past century.

An infirmary was opened in Petersburg by the Thomsonian, Dr. Benj. M. Thomson. In Richmond, Dr. E. D. Robinson advertised in 1844 that he had botanicals and was prepared to take care of patients at his office on Shockoe Hill. As early as 1836, the Richmond Thomsonian Infirmary was advertised in Richmond. It was located opposite Trinity Church and was superintended by Dr. George K. Hooper

These men used very attractive advertisements in the local papers to entice the ignorant. One offered to purchase diseased servants, and liberal prices were offered for those considered incurable. Another claimed cures in eight out of ten of those who applied who had been pronounced incurable.

Blanton states that "the Eclectics must have felt that they had gained a good foothold in Virginia, for, in 1846, they set about founding a school in Petersburg." It was incorporated by an act of the Assembly March 8, 1847.

Samuel Thomson had a large degree of native ability. Dr. Benjamin Waterhouse, who introduced Jenner's method of vaccination in the United States and supplied Thomas Jefferson with the product wrote:

"Had John Hunter, whom I knew well, been born and bred where Samuel Thomson was, he would have been just such another man; and had Samuel Thomson been thrown into the same society and associations as John Hunter he would, in my opinion, have been his equal, with probably a wilder range of thought; but both are men of talent and originality of thought."

Thomson visited Dr. Benjamin Rush and presented his theories to that foremost leader in American Medicine. Rush died soon afterwards and left no memorandum of his opinion, of either Samuel Thomson or his system.

It is a profound misfortune that anyone with native mental capacity such as that possessed by Samuel Thomson could not have had the benefits of cultivation by formal education. The vagaries and sloughs of his life might have been relieved and his mind divested of that poison ignorance which made him a lesser figure than he should have been as a pharmacologist and clinicist. We came to denounce Samuel Thomson as a quack and turn aside with sincere regret that he had no worthwhile

educational opportunities in youth. Out of ignorance, substandardized colleges, and faulty curricula will arise once more such figures to prey upon a gullible public. There can be no "shorter" cuts to Scientific Medicine tomorrow than there were yesterday.

BIBLIOGRAPHY

A narrative of the Life and Medical Discoveries, Samuel Thomson, Columbus, Ohio, 1835.

The New Guide to Health or the Botanic Family Physician—Containing a Complete System of Practice, Samuel Thomson, 1833, Columbus, Ohio.

Lectures on Medical Botany Denominated Thomson's New Theory of Medical Practice, delivered in Cincinnati, Ohio, Samuel Robinson, 1834, Boston.

History of Medicine in The United States, Francis R. Packard, M. D , Paul B. Hoeber, Inc., N. Y., 1931.

American Medical Biographies, Howard A. Kelly, M. D., LL. D., F. A. C. S., and Walter Burrage, A. M., M. D., Baltimore, 1920, The Norman Remmington Co.

The New Medical Follies, Morris Fishbein, Boni & Liveright, N. Y., 1927.

The History of Medicine in the Nineteenth Century in Virginia, Wyndham B. Blanton, M. D., Richmond, Garrett & Massie, 1933.

How Heart Disease Brings Sudden Death.

An editorial in the December 8 issue of *The Journal of the American Medical Association* pointed out that myocarditis, inflammation of the heart muscle, is second only to a ruptured aortic aneurysm as the cause of sudden death. An aneurysm is a sac formation of the wall of the heart due to a weakening or degeneration of the heart muscle.

The editorial stated that "myocarditis occurs secondary to many diseases of bacterial or virus origin and to some conditions of undetermined origin. The following incomplete list mentions conditions in which acute myocarditis has been demonstrated at necropsy [postmortem examination]: diphtheria, typhoid, para-typhoid, typhus, dysentery, mumps, pneumonia, scarlet fever, meningococcic infection, gonococcic infection, tularemia, streptococcic and pneumococcic meningitis. . . ."

It is difficult to separate the features due to myocarditis because it is usually masked by the primary disease. However the common characteristics usually are labored breathing, discomfort over the heart, palpitation, pallor, and weakness of the pulse out of proportion to the severity of the general infection. The pulse is usually rapid and irregular and the blood pressure is, as a rule, low.

The Journal stated that it was important to recognize the existence of this condition because "with the frequency of infectious diseases and miscellaneous infections there are but few persons who during a lifetime do not have inflammatory myocardial foci."

Sex Endocrinology—For the Medical and Allied Professions.

Schering Corporation has just released the first edition of a new monograph on sex endocrinology. The volume of ninety-six pages, including eight full page plates of four colors each, brings to the reader the latest information on the diagnosis and treatment of sex endocrine disorders. All subject matter is presented concisely, lucidly and with omission of all confusing theoretical considerations. A brief and interesting history of the development of modern hormone concepts is included.

In the section dealing with the chemistry of the sex steroids, structural formulas are presented and the similarity in molecular configuration briefly discussed. Recommended therapy is highly practical, for specific preparations and dosage—what to give, how much, how often and for how long—are enumerated simply and clearly. Tables are included for ready reference and aid in fixing elusive facts firmly in mind. Diagrammatic representations of the influence of pituitary hormones on the gonads as well as of photographs of patients with various endocrine disturbances are presented.

UNSUSPECTED TUBERCULOSIS

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Mass x-ray examination by such groups as Selective Service[1] and the U. S. Public Health Service[2] has revealed that approximately 1 per cent of apparently healthy individuals will show pulmonary lesions of tuberculosis. It has been estimated that from one-third to one-half of this 1 per cent are active or probably active. Surveys of general hospital and clinic admissions[3,4,5] have revealed that approximately 3 per cent have definite pulmonary lesions, and that 0.3-0.4 per cent have active pulmonary tuberculosis. Sixty to 70 per cent of cases so discovered are in the minimal stage.

In an effort to approximate the number of unsuspected cases of tuberculosis passing through the Medical College of Virginia Out-Patient Clinic, a study was made of patients attending the Prenatal Clinic. The prenatal cases were selected for the study because the follow-up of that group was more satisfactory. In addition, because of the ill effects of pregnancy on untreated tuberculosis, it was felt that the diagnosis of unsuspected pulmonary tuberculosis in this group was of primary importance.

Because of the shortage of the standard 14 in. by 17 in. celluloid x-ray films during the period of investigation, it was impractical to have roentgenograms made in each case. Accordingly, it was decided to fluoroscope each patient and to x-ray all cases where definite or suspected pulmonary lesions were found by fluoroscopy. Chest films were also made in cases where fluoroscopic examination was unsatisfactory because of the thickness of the chest. Also, when there was a known contact with tuberculosis and the fluoroscopy was negative, a chest film was taken. The latter two groups were to serve as a "check" on the relative accuracy of the fluoroscopic examinations. Since the standard 14 in. by 17 in. chest film has been shown to be the most accurate roentgenographic means of diagnosing pulmonary tuberculosis, it was conceded that the fluoroscope would fail to reveal some lesions demonstrated by x-ray. The interpretation of chest films were made by different individuals so as to prevent prejudice in their reading.

MATERIAL AND RESULTS

The patients attending the Prenatal Clinic are of the lower economic strata and none are private patients. Approximately 85 per cent are negroes. Nineteen per cent had previous x-rays of the chest within a 5 year period. Two cases of known pulmonary tuberculosis are not included in this study.

The age groups of those examined are in figure 1.

FIGURE 1: AGE DISTRIBUTION.

AGE RANGE	NUMBER	PER CENT
12-14 years	14	1.2
15-19 years	231	30.0
20-24 years	265	34.3
25-29 years	147	19.0
30-34 years	82	10.6
35-39 years	27	3.5
40-44 years	6	0.7
Total	772	100.0

During the period of fluoroscopic survey about 2,000 patients attended the Prenatal Clinic. Of this number 772 were examined by fluoroscopy. In 20 cases lesions were seen on fluoroscopy that were proved by x-ray. The lesions discovered are divided into two major groups: 1. The clinically significant, in which are included all active and probably active lesions; there were 7 cases (0.9 per cent) in this group—5 of these were colored and 2 were white.

2. Clinically insignificant lesions, in which are included apparently healed pulmonary tuberculosis, cases of pulmonary fibrosis probably non-tuberculous, azygos lobes and apparently healed hematogenous tuberculosis; 13 cases (1.7 per cent) fell in this group. In figures 2 and 3 the types of lesions are classified further as to their exact nature.

FIGURE 2: CLINCIALLY SIGNIFICANT LESIONS

Moderately Advanced, Active	1
Minimal, Active	4
Minimal, Probably Active	2
Total	7 (0.9 per cent)

FIGURE 3: CLINICALLY INSIGNIFICANT LESIONS

Minimal, Inactive	5
Healed Hematogenous	3
Interlobar Fibrosis (Marked)	2
Lower Lobe Fibrosis (Non-tb.)	2
Azygos Lobe	1
Total	13 (1.7 per cent)

There were 94 cases that were negative by fluoroscopy, but because of thickness of the chest, or because of known contact, films of the chest were made. In this group one film revealed a definite lesion: A case of healed, minimal, apical, pulmonary tuberculosis.

COMMENT

It is generally accepted that physical signs and symptoms are usually absent in minimal lesions, and are frequently absent in advanced lesions of tuberculosis. Consequently, if tuberculosis is to be discovered early, it is necessary to examine all individuals roentgenologically. Robins found a 0.13 per cent to 0.28 per cent yearly incidence of disease among a group with previously negative chest films. This suggests the necessity of periodic examinations, if a case finding program is to discover the maximum number of cases in the early stage. Because of the usually rapid progression of this disease in the negro, it is unlikely that a very large percentage of cases will ever be discovered early in this race, even with periodic examinations. This fact is brought out by recent mass surveys[1, 7, 6, 3, 8] that have shown that the incidence of disease is approximately the same in the white and colored races, although the death rate is many times higher in the latter. The early lesions in the Negro progress into the advanced stages within a comparatively short period of time, and as a result, most cases of tuberculosis among this race will probably continue to be discovered as the result of clinical manifestations of the disease.

Eisele et al.,[9] making a fluoroscopic study of 10,968 white prenatal patients at the Chicago Lying-In Hospital, demonstrated an incidence of 1 per cent clinically important tuberculosis. At the Margaret Hague Maternity Hospital, Perlberg[11] found 1.2 per cent of clinically significant lesions among 2,824 prenatal cases that had routine chest films. Graham[12] found 1 per cent active cases of tuberculosis among 800 private prenatal patients on routine chest films.

Comparable figures have been reported among general hospital admissions. Childress, Debbie and Harmon[5] examined by chest films all admissions to the Grassland (New York) General Hospital over an 18 months' period, and found lesions of re-infection tuberculosis in 2.8 per cent, and active lesions in 0.35 per cent of patients examined. In a similar study at the Wisconsin General Hospital, Pohle, Paul and Oatway[13] found 3 per cent to have significant pulmonary lesions and 0.3 per cent to have active pulmonary tuberculosis.

In the present study 772 prenatal patients were examined fluoroscopically and 0.9 per cent were found to have significant pulmonary lesions. Five (0.65 per cent) had definitely active pulmonary tuberculosis. In an additional 13 (1.7 per cent) cases pulmonary lesions were noted that were of no clinical importance. The pulmonary lesions discovered were all asymptomatic, and no abnormal signs were found on examination. They were all unsuspected lesions, since all cases of known tuberculosis were excluded.

The total yearly clinic registration is approximately 6,000. If the incidence of tuberculosis found in the Prenatal Clinic holds for the entire clinic, approximately 60 cases of active, or probably active, tuberculosis pass unsuspected through the clinic each year.

In examining the x-ray films taken in cases where no definite lesion was seen on fluoroscopy (contacts and thick chests), one lesion was discovered. This was the case of healed, minimal, apical tuberculosis that was mentioned previously. The lesion missed on fluoroscopy was limited to the supraclavicular region, which is the most unsatisfactory area of the lung field to examine because of the bony structures in this area. It should be mentioned that most of the small lesions in this area are inactive or healed. The site of most of the early post primary lesions is in the subclavicular region, which is a comparatively satisfactory area of the lung field to examine fluoroscopically. It must be emphasized that the standard 14 in. by 17 in. x-ray film remains the most accurate means of discovering small pulmonary lesions. However, the cost and shortage of these films at the present time prevents their use as a routine procedure.

Within the next few years it is likely that routine roentgenologic examinations will become available to all population groups. In view of the work of

Robins,[6] showing a yearly incidence of 0.13 per cent to .28 per cent of disease among those with previously negative chest films, the problem is not only to include the entire population in a mass survey, but to work out a program of periodic roentgenologic examinations. It is very likely that the fluoroscope will be an important instrument in achieving this goal. Its relative inaccuracy will probably be overbalanced by the increased availability of this equipment in the future.

The accuracy of the fluoroscopic examination is, of course, in direct proportion to the experience of the operator, and if the use of the fluoroscope becomes widespread, it will be necessary for medical schools and teaching hospitals to include the teaching of fluoroscopy as part of the physician's education.

If chest films should be made easily available and at a nominal cost, the need of routine chest fluoroscopy in the physician's office would be eliminated. As the result of the development of the 4 in. by 5 in. film and the 35 mm. and 70 mm. x-ray equipment, the time may be near when inexpensive chest films will become available to private and clinic patients alike. Inexpensive and easily available chest films would result in an immediate expansion of the present case finding surveys and probably would accomplish more than anything else in the conquest of tuberculosis through early diagnosis. The time is at hand when complete physical examination should include some radiological chest examination.

SUMMARY

1. During an 18 month period 772 patients in the Prenatal Clinic were fluoroscoped. Twenty (2.6 per cent) were found to have pulmonary lesions, and of these, 7 (0.9 per cent) had clinically significant pulmonary tuberculosis. This experience is compared with other surveys of similar groups.
2. Six of the seven cases of significant lesions were in the minimal stage. One was moderately advanced.
3. It is estimated from this study that approximately 60 cases of unsuspected active tuberculosis pass through the Medical College of Virginia Out-Patient Clinic each year.
4. Because of the yearly incidence of tuberculosis, case finding programs should include periodic x-ray examinations.
5. In order to achieve this goal of periodic roentgenologic examination, it is necessary that such examination become less expensive and more easily available. The more recently developed small film x-ray equipment should go a long way toward bringing this about.

BIBLIOGRAPHY

1. Freer, Col. Arden: *Dis. of Chest* **10**:197-205, 1944.
2. Hilleboe, H. E., and Gould, D. M.: *J.A.M.A.* **125**: 241-243, 1944.
3. Bloch, R. G., and Tucker, W. B.: *Am. Rev. Tuberc.* **50**:405-417, 1944.
4. Gourwitch, J.: *Am. Rev. Tuberc.* **50**:214-222, 1944.
5. Childress, W. G., Debbie, A. G., and Harmon, E. L.: *J.A.M.A.* **122**:1063-1065, 1943.
6. Robins, A. B.: *Am. Rev. Tuberc.* **47**:1-10, 1943.
7. Edwards, H. R.: *Am. Rev. Tuberc. Supp.* **41**:1-159, 1940.
8. West, J. B.: *Am. Rev. Tuberc.* **41**:114, 1940.
9. Eisele, C. W., Tucker, W. B., Vines, R. W., and Batty, J. L.: *Am. J. Obst. and Gynec.* **44**:183, 1942.
10. Tucker, W. B., and Bryant, J. E.: *Am. J. Obst. and Gynec.* **45**:678-685, 1943.
11. Perlberg, H. J.: *Am. J. Obst. and Gynec.* **39**:826-830, 1940.
12. Graham, H. K.: *W. J. S., Obst. and Gynec.* **49**:107, 1941.

Schering Corporation,

With manufacturing plants at Bloomfield and Union, New Jersey, has announced a new branch office at 149 New Montgomery Street, San Francisco. This will provide greater service to distributors and to the professions, it being a complete unit with trained personnel and adequate stocks.

POSTAGE STAMPS AS A MODE OF TRANSMITTING BACTERIA*

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The licking of postage stamps suggests the possibility of transmitting infectious bacteria capable of producing disease. Interest in collecting stamps has increased until at the present time Lybarger[1] estimates there are eight to ten million philatelists in the United States. This hobby is not limited to any social, economic or age group. The hazard of infection, if it exists, would be greatest to the philatelist. A review of the medical literature of the past twenty years as well as communication[2] with the U. S. Postal Authorities reveals that this possible route of infection had not been investigated.

In an effort to evaluate the possibilities of transmitting bacteria on the backs of used postage stamps it was necessary to determine three things:

I. Whether or not the gum on postage stamps contained germicidal properties;

II. If pathogenic organisms could be cultured from the solution in which stamps had been soaked free from envelope corners;

III. If pathogenic organisms could be cultured from stamps after they had been licked by patients known to have an infectious disease capable of being transmitted through sputum.

I. *Method:* One hundred mint stamps were obtained from the Post Office Department. The gum was dissolved from these stamps in 50 c.c. of saline solution. A bacterial suspension of staphylococcus albus was prepared, using Hopkins' method of counting bacteria. This suspension was standardized so that each cubic centimeter contained approximately 10,000 organisms.

Ten cubic centimeters of the gum solution was placed in each of four sterile tubes. As a control 10 c.c. of sterile physiological saline was placed in a fifth sterile tube. Into each of the five tubes there was placed 0.1 c.c. of the bacterial suspension. All were incubated for one hour in order to permit the germicidal effect of the gum solution to occur if any were present.

Poured plates of nutrient agar were prepared by adding 1 c.c. of solution from each tube containing gum solution to each of four plates. A similar plate was prepared from the control saline solution. These were incubated at 37°C. for 96 hours. They were examined daily.

Results: At the end of the period of incubation there was only one colony per plate containing the gum solution. There were 25 colonies on the control plate containing no gum solution.

II. The most common procedure of cleaning and handling stamps, as practiced by the philatelist, consists of soaking the used stamps free in a basin of water. This was duplicated in the following study.

Method: Tap water (500 c.c. each) was placed in two bowls. The water from both bowls was cultured for aerobic and anaerobic organisms.

Nineteen unselected stamps from foreign countries were cut from their original envelopes leaving attached only that portion of the envelope which was under the stamp. Most of these stamps were issued by Japan between the years 1890 and 1900. These were placed in one bowl. Nineteen unselected stamps issued by the United States Postal Department during 1943 and 1944 and prepared in the same way were placed in the second bowl.

Each bowl was covered to exclude the possibility of air borne contamination. After fifteen minutes all of the stamps had soaked free from that small part of the envelope to which they had been attached. The fluid from each bowl was cultured, then centrifuged and the sediment of each stained and studied. The sediment obtained from each bowl was cultured as follows:

1. Broth for aerobic organisms
2. Brewer's media for anaerobic organisms
3. Lowenstein's slants for tubercle bacilli
4. Loeffler's media for diphtheria bacilli.

All cultures were examined finally at the end of 96 hours except those for tubercle bacilli. These were incubated for 8 weeks.

Results: 1. Cultures taken from the water in both bowls prior to soaking the stamps were all negative for any organism.

*From the Bacteriological Laboratories of Jefferson Hospital, Philadelphia.

1. Lybarger, Donald F., President of the American Philatelic Society: Personal communication through Mrs. Eugene Klein, of Philadelphia.

2. Block, Ramsey A., Third Assistant Postmaster General, U. S. Post Office Department: Personal communication.

2. Smears from the sediment of each bowl following the soaking of the stamps showed a few clumps of gram positive cocci. No acid fast or other bacilli could be found.

3a. In the culture tubes containing plantings from the bowl of foreign stamps, a heavy growth of staphylococcus albus was obtained at the end of 24 hours.

3b. In the tubes containing plantings from the bowl of American stamps there appeared a very light growth of staphylococci at the end of 48 hours.

4. There was no growth of Corynebacterium diphtheriae on Loeffler's special media in either instance.

5. After eight weeks of incubation there was no growth of tubercle bacilli on the Lowenstein's slants.

III. Because it is estimated that there are approximately 500,000 active cases of tuberculosis in the general population of this country (Dublin[3]) and there is little likelihood of the above small group of stamps containing a stamp which had been licked by a person with active pulmonary tuberculosis, nineteen unused stamps were sent to a sanitorium* for tuberculosis patients.

Method: The nineteen patients with active pulmonary tuberculosis had positive sputums ranging in the Gaffky Scale‡ from G-3 to G-9. All had far advanced tuberculosis with cavitation and were clinically toxic. Each patient was given one stamp to lick and affix to a card. These were sent as first class mail from the sanitorium to the Jefferson Hospital. They were three days in transit. The corner of each card with its stamp was cut off and placed in a separate sterile Petri dish which contained 5 c.c. of 6% sulfuric acid. This strength acid was used in order to kill all organisms other than the tubercle bacilli according to the method of Corper and Uyer[4]. The fluid from each dish was individually centrifuged in sterile tubes. Smears from the sediment of each tube were stained. The sediment of each tube was streaked on slants of Lowenstein's medium. These were incubated at 37°C. (98.6° F.) for eight weeks. The residual sediment from each tube was placed in a common container, was centrifuged, and smears and cultures taken.

Results: 1. The stained sediment showed no acid-fast bacilli.

2. No tubercle bacilli grew after eight weeks incubation.

3. The combined residual sediment from all tubes showed no acid-fast bacilli on either the stained smear or on culture.

CONCLUSIONS AND SUMMARY:

1. The gum on U. S. Postage stamps contains no germicidal properties. However, it has slight bacteriostatic properties, at least for the staphylococcus albus.

2. The staphylococcus albus, a common inhabitant of the nose and throat can withstand drying for long periods of time. A growth of this organism was obtained from stamps (Japanese issue) and from recently issued American stamps.

3. Tubercle bacilli were not cultured from stamps licked by patients known to have active pulmonary tuberculosis. Previous sputum tests of these patients showed as many as one hundred tubercle bacilli per microscopic field. Stained smears of the centrifuged sediment obtained from the back of each stamp also failed to show acid-fast bacilli.

4. All cultures for other organisms, both aerobic and anaerobic, as well as for diphtheria bacilli were negative.

5. This study would indicate that there is little danger of the common use of postage stamps playing an important role in transmitting infectious diseases.

NOTE: Appreciation is acknowledged to Miss Betty Dellette for assistance with the technical procedures.

Jefferson Hospital.

3. Dublin, Louis I., Metropolitan Life Insurance Company: Quotation from the National Tuberculosis Association; Personal communication.

*Piedmont Sanatorium, Burkeville, Va.

‡Gaffky III represents 1 tubercle bacillus per oil immersion microscopic field. Gaffky IX represents 100 tubercle bacilli per oil immersion microscopic field.

4. Kolmer and Boerner: Diagnostic Bacteriologic Methods, Second Edition, Appleton-Century Company; Pg. 483.

THE VALUE OF MASSAGE IN RHEUMATOID ARTHRITIS

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Rheumatoid arthritis is a general disease, and its etiology is unknown. It is progressive and is characterized by marked changes in the joints, muscle spasm, fatigue, and pain. There is no specific treatment, but effort is made towards overcoming the fatigue and alleviating the pain. The source of most of the pain is probably the muscles. Muscular inflammation with spasm is always present. It is usually mild with a scant exudate, but it may be severe with an abundant exudate.

The myositis that accompanies chronic rheumatism and chronic gout is characterized by a generous cellular exudate which soon produces induration and requires much treatment for its dissipation; on the contrary, in the myositis of rheumatoid arthritis, there is a more or less non-cellular exudate, which is circumscribed and more easily dissipated. The muscles seem especially sensitive and with the slightest infiltration are subject to painful spasm. Pain is a great factor and probably the greatest factor in undermining the patient's health and morale. Skillful and understanding massage will keep the pain in abeyance and thereby add the greatest boon to the patient's welfare.

In every spastic muscle, there are one or more tender spots. These are areas of infiltration, and, if they are rubbed out, the spasm is relaxed and the pain relieved. The number of treatments required for relief varies with the amount of exudate.

Unfortunately, massage is not ordered with the idea of relieving pain, and it is not directed to the infiltrated muscles, but it is prescribed solely as an invigorating agent. As a result, the patient receives a light effleurage which leaves the pain untouched.

The history of a patient seen recently may explain more clearly the need for specific instructions in ordering massage: A woman with pain in her right neck, under the advice of her physician, received daily treatments of infra-red light and massage for two weeks without relief. This was a case of myositis, and a circumscribed area of infiltration was found high up in the neck. One massage treatment was sufficient to soften the exudate and relieve the spasm and pain. The doctor's prescription was correct unless he omitted proper instructions. The masseuse failed to give relief, either from lack of instructions or lack of training.

If massage is to be successful in this disease, the masseur or masseuse must be familiar not only with the technique but must be able to distinguish between the normal and the diseased tissue.

Every physician treating this disease should be able by palpation of the muscles to discover any pathology and should know enough about the function of massage to give proper instructions to the operator. As long as general massage is ordered without specific instructions to the operator relative to the pathology, massage will not have the place in the doctor's armamentarium that it deserves.

An examination of a patient with rheumatoid arthritis is not complete until the muscles have been palpated and the infiltrated areas noted. The operator is now directed to treat only the diseased muscles noted in the examination.

The frequency of treatment (daily or three times a week) depends upon the vitality of the patient. Treatment is discontinued when the muscles are restored to normal.

If any muscle is found acutely inflamed, massage is postponed and moist heat is applied.

The form of massage used to dissipate the infiltrated areas is classified as friction or pressing and consists of the use of the tips of the three middle fingers or thumb, making gradually increasing pressure and applying circular movement. This is kept up until the operator feels the tissues give or relax, which means the treatment is effective. Whether the operation is to be carried further at this séance will depend upon the judgment of the operator. At this stage, it may be desirable to finish the treatment with effleurage and kneading (petrissage).

Although contrary to custom, we use massage over the joints, taking care not to injure the synovial membranes. Multitudes with this disease are groping. They feel they have been assigned to the scrap heap. They are forever grateful to any physician who will offer them hope and relief. The answer is physical therapy, and the agent of choice is massage. Proper massage in rheumatoid arthritis will help to keep the muscles free of exudates and thereby lessen pain and help to prevent contractures and make for a longer life of activity and freedom from complete invalidism.

EXPLORATION OF CYSTIC AND SCLEROTIC OVARIES AS A MEANS OF PRESERVING THEIR FUNCTION*

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Functional inadequacy of the ovaries arising from cystic and sclerotic disease is extremely prevalent. In fact, it is the capital source of symptoms which constitute a large fraction of female indispositions, especially those translated into variations of cyclicity such as bleeding too much, too little, too often or not at all. The emotional complexes, occurring independently or in association with these deviations, are sequelae, certainly familiar and usually somewhat trying to every clinician. The tremendous use of synthetic sex hormones for supplemental as well as replacement therapy emphasizes the frequency and wide distribution of endocrine imbalances derived from incompetent ovaries, regardless of whether or not the original dereliction lies with them.

Exception may properly be taken to grouping cystic and sclerotic ovaries together. From the standpoint of etiology and pathology there may be distinctions which, when carefully scrutinized, are more than likely differences in the projection of the same processes. This is debatable but when the symptomatology and therapy are considered the similarity becomes apparent from their response to treatment, the chief interest of the present discussion. Ovaries that are normal in size, but affected by unerupted and regressing follicles, are found far more frequently than those with frankly cystic masses.

This communication describes an attempt to preserve the function of cystic and sclerotic ovaries by an exploration which begins generally at the ovarian hilum along the white line and is pursued throughout the entire ovary. Its purposes are to liberate vessels and nerves in the hilum strangled by the presence of atretic follicles and connective tissue through which they must pass to enter the ovary, and to give the whole organ an opportunity to adjust its intrinsic pressures. If a sufficient number of cells capable of elaborating hormones subsists, improvement in their trophic conditions should restore the metabolism enough to relieve the symptoms of ovarian inadequacy. The period of effective usefulness of such ovaries can thereby be prolonged and the question of castration need seldom be considered except in complete, not partial, inflammatory degeneration, when the ovarian parenchyma is entirely replaced by a benign tumor and, of course, malignancy.

The conservation of ovaries has been the objective of much research, and their all too frequent sacrifice has long been deplored. Except in the most phlegmatic, extirpation of these organs may quiet one group of symptoms only to create others. Many surgical measures have been tried to preserve them or their endocrine producing faculty but have met with little permanent success. Recently the problem has been attacked through procedures at the free border with more favorable results. These with some details of the historical background will be discussed in later paragraphs. The present inquiry is based upon a new conception of the pathology and approaches the question from a mechanistic as well as a hormonal standpoint.

A better appreciation of the anatomy of the normal ovary can be obtained from the following lengthy quotation than can be had from the standard anatomies. It is from one of the forgotten classics of medical literature: Arthur Farre's[1] article "The Uterus and Its Appendages" which contains the original description of the white line. This structure, heretofore only occasionally mentioned, may have much more significance than has been attributed to it.

"Component parts: The ovary is composed of, 1st, protecting parts, or tunics; 2nd, a parenchyma, or stroma, in which they are imbedded; 3rd, the proper secreting structures, in the form of closed sacs or vesicles, containing the ova; 4th, vessels and nerves.

"1. The Protecting Parts or Tunics.—These are two in number, and correspond precisely, both in structure and derivation, with the analogous coverings of the testis.

"The peritoneal covering constitutes the outermost of these coats, and consists of the layer of peritoneum derived from the posterior lamina of the broad ligament, which serves to connect the ovary with

*Read before the Staff of the Sinai Hospital, Baltimore, Md., October 26, 1944.

the parts adjacent. Except at its base, the ovary is so closely invested by this peritoneal lamina, that no effort with the scalpel will suffice to detach it from the tunic beneath. This intimate union, however, of the two coats ceases at the base of the ovary, where a white, irregular, and somewhat elevated line is observed on either side, extending in a horizontal direction, and rising higher on the anterior than on the posterior surface of the gland. In its intimate texture this covering of the ovary differs in no respect from the peritoneum covering the viscera generally.

"The tunica albuginea, or tunica propia, constitutes the special or proper covering of the ovary. It serves to give form and solidity to the organ, and to protect the ovisacs and ova from injury. This coat has a nearly uniform thickness and forms a complete investment for the ovary, except at its lower border, where the fibres are either very thinly scattered and interlaced, or are altogether wanting, leaving a longitudinal space termed the hilum or vascular fissure, and extends along the entire base of the ovary.

"The tunica albuginea has been commonly regarded as a more condensed portion of the stroma, or parenchyma, of the ovary; but from this it is readily distinguished, not only by its clear white color, and dense and almost cartilaginous hardness, but also by its microscopic characters. On account of its extreme toughness, this tunic is not very easily separable into fragments sufficiently minute for microscopic examination. But when small portions have been so obtained, the margins of the fragments exhibit numerous close-lying and irregularly arranged fibres of developed connective tissue, projecting from a dense, structureless matrix interspersed with granules, which serves to connect the fibres together, and to which apparently is due, in a great measure, the peculiar toughness of this membrane, while its remarkable whiteness is explained by the much smaller number of blood-vessels that it contains as compared with the general parenchyma of the ovary. The tunica albuginea, therefore, is not merely a more condensed form of the ovarian stroma, but appears to result from a development of tissues which exist in the stroma in an elementary or embryonic form, as well as from a more close conjunction and blending of those tissues.

"2. The parenchyma, or stroma, constitutes the proper tissue of the ovary. It lies immediately beneath the tunica albuginea, and fills up the whole of the intermediate space between the ovisacs, to which it acts as a germ bed, protecting the ova from injury, and serving for the conveyance of blood-vessels to the ovisacs. This tissue is sometimes of a pale-pink, but more often of a bright-red color, from the large number of blood-vessels which it contains, whose arrangement proceeding from within, and radiating outwardly in all directions, gives to this tissue, when viewed by the naked eye or by a common lens, the appearance of being formed into bundles or laminae.

"The microscope, however, serves to resolve this tissue into its true elements. When so examined, the stroma is found to be composed mainly of blood-vessels, to which a great part of its strength and toughness is due, the intermediate spaces being filled up by a fibrous structure not separable into bundles, like ordinary connective tissue, and having no distinct fibrillar arrangement, its chief elements being single white fibres of ordinary connective tissue, numerous fusiform embryonic fibres, and elliptical and round cells or granules, the whole being coherent and strongly united together.

"Vessels and Nerves.—The ovary derives its supply of blood chiefly from the ovarian (spermatic), but in part also from the uterine arteries. So free, indeed, is the communication between these vessels, that the organ may be equally well injected from either source. The communication is effected chiefly by means of a branch of the ovarian artery, which passes inwards to inosculate with a terminal branch of the uterine artery, this anastomotic branch being occasionally so large as to constitute the principal source of supply of the ovary. The terminal vessels are conducted to the lower border of the ovary between the folds of the posterior duplicature of the broad ligament, where they lie in parallel lines, and are readily distinguished by their tortuous or spiral form. Having entered the base of the organ, they spread out into those numerous ramifications which penetrate every part of the ovarian stroma, and give to this structure its peculiar fibrous aspect. From their extreme branches the blood is returned by the veins, which pass to the base of the organ, where they are very numerous. They form, near the ovary and between the folds of the broad ligament, a plexus termed the ovarian or pampiniform plexus, the vessels of which communicate also with the uterine plexus. Valves are found in the ovarian

veins only in exceptional cases."

It is my thesis that it is possible for an ovary with poor function to simulate the normal ovary and its true state can be discovered only by an investigation of its interior. This situation occurs far more frequently than is commonly supposed. There are many variables affecting the ovary, among which are pregnancy, age and the alterations accompanying the menstrual cycle in which follicle changes play such a large role. The complacent popular comprehension of the normal ovary is unwarranted because it does not take into consideration the deceptions engendered by the presence of an enlarging follicle that does not reveal itself in any way. It must be remembered that a follicle can develop at any location in the ovary. If this happens between the two dense layers of the tunica albuginea at the white lines, the consequences of the expansion and persistence of an abnormal follicle may be far-reaching. The distinction lies in the differences between the normal and abnormal follicle of which the following description[2] by Farre is unsurpassed.

"It may be asked, therefore, in what respect does the normal differ from the abnormal state, and by what characteristics may the one be distinguished from the other? It appears to me that Rokitansky, in the account which he has given of hyperaemia of the Graafian follicle, has included under one head both the natural and the morbid conditions; for his description will very well apply to the rising follicle, in its second stage, when the escape of blood into the cavity has been shown to be a normal, and in some animals a constant occurrence. The presence, therefore, of blood within the follicle for the reasons already fully given, must not be regarded as necessarily affording evidence of a morbid state. There are, however, certain peculiarities in the condition of the unhealthy follicle, by which it may be distinguished from that which is natural. The natural follicle, when preparing for dehiscence, is always near the surface, and often projects considerably above the level of the ovary. Its coats are unequally thick; the thinnest portion being always found at the most prominent point of the follicle. There is considerable vascularity about this point, plainly visible externally, and here the process of attenuation and absorption continues to be progressive until the sac spontaneously ruptures. The walls of the follicle are at this stage of a bright yellow color. The liquor folliculi is either clear and limpid or intermixed with blood, or the centre of the sac is filled by a coagulum, which is at first bright red, and afterwards becomes pale, and at length nearly white. The coagulum may adhere to the walls, and undergo fibrillation and subsequent conversion into a solid body, or into a dense white membrane, or it may be rapidly absorbed.

"On the other hand, the morbid follicle, although it may not exceed nor even equal in size that which is passing through its normal changes may yet be distinguished by many characters which are the converse of those just described. The morbid follicle is often not peripheral but is more or less central in its position in the ovary. It may attain to the size of one-third or one-half of the ovary, without necessarily causing any distinct prominence above the surface (especially when occurring singly). The walls are equally thick, and exhibit at no part any evidence of attenuation or absorption. No preparation for rupture is indicated externally by any peculiar arrangement of vessels, or by any marked increase of vascularity. The walls do not exhibit the remarkable yellow color nor the cerebral foldings characteristic of the advancing normal ovisac, but the tissues of which they are composed are simply those of the undeveloped Graafian follicle. The contents of the sac are neither the clear liquor folliculi, nor the bright clot, nor the decolorized fibrin, but generally a collection of dark coffee-ground matter, resulting from the admixture of a quantity of decomposing blood corpuscles and fragments of membrana granulosa intermixed with a dirty fluid. On washing out these contents, the walls of the cyst, if the ovary has been injected, are seen to carry numerous vessels, irregularly arranged, but never presenting that rich network of capillaries which is visible after a successful injection of a healthy ovisac progressing towards rupture, especially in those cases where the quantity of yellow oil is not so great as to obscure these vessels altogether.

"By these characteristics the morbid ovisacs may generally be distinguished from those which are healthy. There is enough of similarity between them to prove their identity or origin, and enough of dissimilarity to their divergence from a starting point; the healthy follicle proceeding onward through a course of different changes, which have been already fully described; the morbid follicle exhibiting an apparently unlimited power of growth and deformity, such as will be presently more fully noticed.

"The morbid follicle occurs as a single cyst in the midst of otherwise healthy tissues. Although occupying more than one-third of the entire ovary, it scarcely disturbs the even outline of that organ. Its coats are of uniform thickness throughout. There is no attenuation nor preparation for dehiscence at any particular spot, nor external sign of increased vascularity in one point. But the walls of the follicle contain numerous vessels, distributed nearly equally over their surface. The cavity is filled with loose flocculi of a dark chocolate color, consisting of decomposing blood clot mixed with patches of membrana granulosa. The walls of the follicle are not yellow, and contain no oil globules. They are slightly thicker than those of the healthy follicle. Their component tissues are precisely those which have been already described as characterizing the ovisac in its normal condition.

"Such a condition may, for want of a better designation, be regarded as hyperaemia of the follicle, or it might perhaps be more appropriately termed hypertrophy of the follicles; but in whatever light it may be regarded, it constitutes one of the early stages of those enormous growths, of which more will be said hereafter."

The follicle in an ovary, destined for development, is, as far as I am able to determine, ordained purely by the elements of chance and the accidents of nature; although it may be a definite selective process of which absolutely nothing is known. When one does enlarge between these tough layers at the hilum, there is little or no opportunity for it to complete its evolution to successful maturation. Meanwhile, it can become a menace to the whole organ, not only because of impairment to the surrounding circulation and innervation but also by creating a predicament in the ovary, because of its unyielding capsule, that is analogous to the situation in the glaucomatous eye where the increase in pressure endangers the nourishment and function of every cell. Thus the ovary contains a mechanism capable of consummating its own destruction through a normal, not a pathological, process.

The symptoms of ovarian dysfunction in the series of cases to be presented may be divided into two groups: the first comprising changes and irregularities in the menstrual cycle, and the second, complaints of a neurogenic nature, including tension, irritability, and agitation. These latter symptoms were utilized to determine the suitability for operation in some of the cases by observing the relief obtained from the administration of hormones during the appropriate phase of the menstrual cycle. If the psychotherapeutic response was adequate and the patient not too old, the operation was done. Pain, tenderness, masses and sterility were considered secondary and, although their importance was not minimized, the primary object of the operation was to restore the elaboration of hormones in order to eliminate the necessity for imitating, by artificial means, the normal human endocrine physiology. Perhaps further experience will disclose the value of vaginal smears and endometrial biopsies in the criteria for this procedure.

Thirty-nine patients have had this operation. In addition, for the purpose of gaining experience and improving technique, twenty-two more ovaries were explored in patients operated for other conditions, making a total of ninety-eight ovaries which have been examined in the living subject. Of the thirty-nine cases, thirty have been done too recently to arrive at a correct appraisal of the result. I feel optimistic for their success because of the noticeable improvement in the neurogenic symptoms particularly, which I am hoping will be neither transient nor merely the evanescent elation of convalescent patients. This improvement parallels the changes observed in individuals in whom the deprivation of sex hormones is reduced by suitable therapy. Among these are two women in whom one ovary and both tubes had been removed some years before. The results of exploring the remaining ovary have been equally gratifying from the endocrine viewpoint. Their permanence, however, must be considered more doubtful.

The details of the first nine cases are presented in chronological order: All the patients were white and when suspension of the uterus was done, the Baldy Webster method was used.

Case 1. Mrs. E. G., age 22, operated November 6, 1941, complained of nervousness, irritability, premenstrual tension and discomfort in both inguinal regions with dysmenorrhea severe enough to cause her to go to bed for two or three days. The menstrual flow was scanty. Pelvic examination revealed a small, sensitive uterus, moderately retroverted, and tenderness in both adnexal regions without masses or thickening. At operation the uterus was infantile and retroverted. The ovaries, which were very small, had wrinkled white surfaces, and single thick

white lines were so prominent along the bases as to suggest that here might be a source of trouble. These were resected with difficulty and there was much bleeding. The uterus was suspended. There was a noticeable improvement in the dysmenorrhea, sedatives and bed rest no longer being required and irritability and tension diminished. Bleeding at menstruation was a little more profuse, and the discomfort in the inguinal regions disappeared.

Ordinarily the uterus and ovaries in this patient would have been removed since there had been no response to any therapy before operation and they continued to be a constant source of disability. My attention was sharply attracted to the raised white lines about one-eighth of an inch in thickness just a little below the hila of the ovaries, and I decided to remove them. It was accomplished by exercising bits of it at a time, certainly not a happy or reliable method as the ovaries were nearly destroyed during the process. The nature of the white lines prompted this investigation.

Case 2. Mrs. V. E. B., age 26, operated March 14, 1942, complained of irregularity, menorrhagia, backache, severe premenstrual tension, and sterility. She had been married five years and never practiced contraception. Pelvic examination revealed that the uterus was retroverted with moderate tenderness in both adnexal regions. At operation the ovaries were small with smooth surfaces and no follicles could be seen at the free border. The white lines were prominent and removal of these uncovered a series of small atretic follicles which were nearly uniform in size. The uterus was suspended. For six months after operation the periods were regular, backache and pelvic discomfort disappeared and premenstrual tension was much less severe. The period for the seventh month did not arrive and when last seen she was a little over six months pregnant.

Case 3. Mrs. C. R. G., age 29, operated July 21, 1943. This patient had attacks of severe abdominal pain, lasting two to three days, occurring between periods at about the time for ovulation. The pain originated low in the inguinal region and radiated to the hip and leg. It would occur on either side but more often on the right than the left. Examination revealed the uterus in normal position with extreme tenderness on the side affected. She had two children, so operation was done without too much emphasis on conservative surgery. The ovaries were small and their whole surface uniformly white, but pitted by many depressions. The white lines were clearly defined and their resection was followed by decapsulation. As this was easily accomplished without too much hemorrhage, it was decided to take the risk of leaving these organs in. Since operation she has had no episodes of pain and states she feels more comfortable during her periods than ever before.

Case 4. Mrs. A. E., age 21, operated October 5, 1943, complained of severe backache, dysmenorrhea and menorrhagia, and premenstrual tension. The uterus was completely retroverted with some tenderness in both adnexal regions. At operation the ovaries were of normal size but had thickened capsules at the base. The hila were explored but too much bleeding was encountered to continue, so the uterus was suspended and the abdomen closed. The backache has disappeared and dysmenorrhea slightly improved but the extreme premenstrual tension and menorrhaghia remain about the same. I believe the operation was inadequate and that a much better result would have been obtained with the technique which has since been developed.

Case 5. Mrs. W. A. T., age 33, weight 154 pounds, operated January 10, 1944, noticed that her periods instead of lasting four to five days, were becoming shorter, ending in two to three days and that she was having occasional flushes. Her history included an increasing number of episodes of irritability and crying spells. Administration of estrogen completely eliminated her neurogenic symptoms and flushes. The uterus was slightly enlarged and retroverted with some tenderness in both adnexal regions. At operation both ovaries were slightly larger than normal and exploration through the hila was done through unusually thick and tough tunics by the method to be described. In the right was a large, firm corpus albicans which was adherent to both surfaces of the ovary with thick bands of fibrous tissue, and in the left, a series of small atretic follicles under great pressure, which must have been interfering with the metabolism of this ovary. The uterus was larger than normal but was not disturbed. The period after operation lasted four days and her weight one month later was 146 pounds. The succeeding period was five days. Meanwhile, the flushes disappeared and her weight reduced to 123 pounds by October 1, 1944, although her appetite and intake of food increased.

The symptoms of estrogen deprivation completely disappeared. She was very enthusiastic about the outcome of her operation and described herself as returning to the condition and sensations of well-being she had when about the age of twenty to twenty-five.

Case 6. Miss H. M., age 19, operated February 18, 1944, complained of severe dysmenorrhea, backache, and premenstrual tension. Because of complete retroversion of the uterus, operation was advised. The ovaries were prolapsed along with the uterus. It was suspended and the ovarian hila explored. Externally the ovaries seemed to be normal but the white line was much thicker and tougher than it at first appeared and numerous follicles at various stages of development were uncovered. The backache, dysmenorrhea, and tension have disappeared and there is a general sensation of a feeling of fitness that she never observed before. Perhaps I may be accused of bias, but, according to my experience with suspensions, I feel that it alone would not have accomplished these results, especially the improvement in subjective sensations.

Case 7. Mrs. G. V., age 27, operated February 19, 1944, had not menstruated for nine months and was not pregnant. Her husband was soon to return from overseas and she was anxious to menstruate so as to increase the possibility of conception. Hormonal therapy was unavailing. Examination revealed no pathology, but her right tube had been removed along with her appendix through a small rectus incision several years before—she did not know why. At operation the left tube, uterus, and ovaries appeared to be normal, but on exploration of the hila the ovaries immediately distended to nearly twice their original size. The cause of this expansion was not due to hemorrhage into the organ but seemed to be the result of the sudden release of the arterial circulation. She menstruated while in the hospital and has continued to be regular with periods averaging four to five days and a normal amount of flow.

Case 8. Mrs. B. T., age 21, operated March 13, 1944, menstruated only twice a year since puberty. The last period, occupying only one day, took place in January of this year and she was sterile after two years of marriage. Her uterus was infantile but normal in position and no tenderness or masses were noted. At operation both ovaries were normal in size but their surfaces were uniformly thick and dense, resembling testicles in appearance. The white lines were visible but not prominent and when opened, the ovaries collapsed as a quantity of clear fluid under pressure escaped, apparently from a follicle occupying almost the whole ovary. Very little bleeding occurred. It was embarrassing to have left what seemed only the shell or capsule of these organs but since they were better than nothing, the abdomen was closed. On March 27, a period began, which continued for five full days, and on May 20 she complained of nausea and intense soreness in both breasts. When seen on October 20, 1944, she was in about the seventh month of pregnancy.

Case 9. Mrs. J. N. T., age 33, operated May 24, 1944, first came to my office in August, 1943, with her nose bleeding and violent headache. In accordance with the theory I have advanced regarding spontaneous hemorrhage,[3] she was given 1 mg. of estrogen and the headache and bleeding subsided in about an hour. She had had many episodes of epistaxis, averaging three a month for the last five years, was nervous, tense, chronically fatigued, and frequently depressed. No abnormalities were found on examination, but the symptomatology indicated deprivation of estrogen. This was administered and her symptoms improved greatly until operation was suggested, with the hope that the estrogen capacity of the ovaries could be restored. Operation was done just at the close of menstruation for the purpose of giving the estrogen producing cells their greatest opportunity for production. The ovaries were found to be of normal size, shape, and consistency, but exploration of the hila disclosed many atretic follicles and fibrosis sufficient to strangulate the circulation. Four days after operation she complained of an intense offensive vaginal odor which was described to be like that she was accustomed to have after the menstrual periods of her early twenties. This undoubtedly was due to increasing activity in the vaginal mucous membrane as a result of enlarged estrogen production as she has had no epistaxis or headaches and her neurogenic symptoms have improved remarkably.

INDICATIONS FOR OPERATION

One naturally hesitates to advise a patient to undergo the hazards, discomforts, and expense of an operation on so intangible a basis as an emotional disturbance which neither endangers life nor is nec-

essarily due to an endocrinopathy. The therapeutic armamentarium should be exhausted before any suggestion of an operation is made. In addition, the almost total inability to predict the condition of the ovaries, especially with reference to the retention of intact ovarian cells, puts the ultimate prognosis on such a doubtful plane as to make the whole procedure unattractive to both surgeon and patient alike. Yet recently developing emotional disturbances can become uncomfortable enough, with the newly depressive experiences and radical changes in the subjective sensations associated with them, to drive the patient to her physician for relief, and that fact alone can be utilized as one of the indications as in Case 5.

Considerable experience, insight, and the capacity and inclination for the analysis of emotional states, are necessary to distinguish psychotic conditions, situational conflicts, and inflexible personalities from the fretfulness, despondency, and explosiveness so commonly associated with imbalances of the sex hormones. This alone would require an extended discussion. Integration of many factors is required, but the decision is more often than not activated by the symptoms and signs which I have designated as secondary but carry sufficient weight in themselves to influence the verdict. These are sterility, displacements, masses, menstrual abnormalities, and other discomforts usually attributed to disorders of the female sex organs. Moreover, the test I have mentioned, which embodies the response to hormone therapy, can be used when the emotional conditions alone are to be judged, and, carried further, using hormones either singly or in combinations and sequences, may determine if the various dysfunctions of the menstrual cycle are likely to benefit from ovarian preservation.

Once inside the abdomen, the decision to explore the ovarian hilum is not difficult to make. Regardless of whether the ovary is small, wrinkled, and nodular, or is of normal size and consistency, the thickness of the cortex or any large difference in density between the surfaces above and below or at the white line is one determining factor. When palpation of the ovary between the thumb and first two fingers suggests an increased internal pressure the hilum should be opened. Finally, if careful inspection of the cortex shows no evidence of recent rupture or preparation for rupture of a follicle, that ovary should be investigated regardless of the internal pressure or the absence or presence of cortical sclerosis. It is useless to try to locate unruptured follicles or corpora albicantia through the capsule by palpation. Sometimes this can be done but it is too unreliable. When the ovary does not feel tense and there are numerous follicles of different sizes present, especially along or near the free border, there is no reason to explore. The white line marks the transition of the usual peritoneal endothelium of the mesovarium into the cylindrical germinal epithelium covering the exterior of the ovary that appears dull and without the lustre characteristic of serious surfaces. It is along this line that special attention should be directed.

Exploration of the other ovary is indicated also when a large cyst is present in one of them. For instance, a large chocolate cyst about eight inches in diameter was resected from the left ovary of a 29 year old white girl while the right appeared externally to be normal. Nevertheless, a beginning cyst of the same type was found in its hilum also which undoubtedly would have developed to require another operation. Perhaps other cysts may come into existence but then again they may not. Meanwhile, she will have the opportunity for conception so earnestly desired. In addition to removing the large cyst, the hilum of that ovary also was explored and numerous small follicles were discovered.

One is often chagrined, upon entering the abdomen, at finding little to account for a syndrome that seemed to be referable to the reproductive organs. Moreover the symptoms of a concealed tense follicle often simulate those of other diseases, particularly appendicitis in girls of the teen age. In such instances the answer to an obscure and perplexing predicament may sometimes be found in the ovary which should be investigated under these circumstances regardless of any other indications. Exploration of the ovary takes little time and is practically without hazard.

PATHOLOGY

The gross pathology consists essentially of follicles in various stages of development and regression occurring in otherwise healthy tissues which, when not peripheral, often attain a large size "without attenuation or preparation for dehiscence and scarcely disturbing the even outline of the ovary". Others that are more peripheral can enlarge until the ovary seems a mere appendage of the cystic conformation.

The contents of these cysts vary from a dark thick brown material through light yellow to a clear white fluid, but is it the cyst itself, not the character of the contents, which affects the ovary. In the living subject the effects on the circulation and internal pressure of the organ can sometimes easily be seen with the naked eye when the hilum is opened. For instance, in Case 7 the gradual enlargement of these structures appeared convincing that relief was being given to the circulation; but more frequently, unless large cysts are present, no alterations in size and shape are observed, and, instead, the follicles and the fibrosis are indicative of the poor conditions in the hilum that can require several months after operation to become relieved.

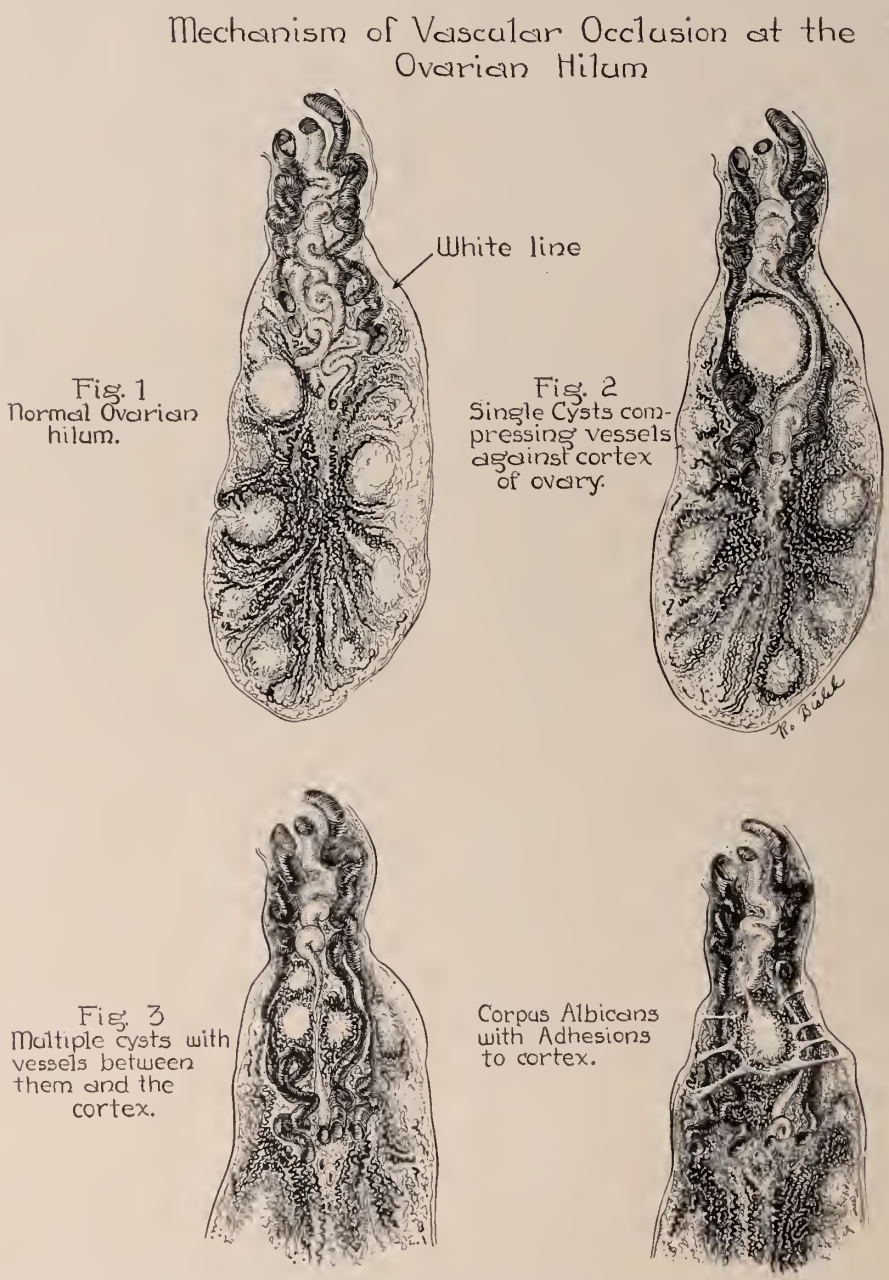


Plate I.—Sagittal sections of the ovary illustrating how follicles near the hilum can affect the circulation without any indication of their presence on the surface.

When the ovary is not enlarged, atretic follicles produce changes in three different ways. Upon exposing the ovarian stroma one large or a line of

small follicles of varying diameters and pressure may be found in the base, certainly without hope of ever maturing and in the meantime arresting and suffocating the vessels and nerves going distally to the remainder of the organ. Such follicles when they are tense can cause pain, although they do not always increase the total intra-ovarian pressure. They affect the tissues around and between them. Then, almost as frequently will be found one or more corpora albicantia which are hard, firm, and unyielding, surrounded by masses of fibrous tissue forming trabeculae between the two surfaces of the ovary and so extremely resistant to the dissecting knife that one wonders how a metabolism of such delicate nature can function below it. This condition can cometimes be detected externally through the presence of a large scar that often extends the whitesess of the ovary up onto the mesovarium and resembles the peritoneal scar over a peptic ulcer. Last-

Fig. 1.—Section across the spiral vessels at the level of the white line showing the rich blood supply. This ovary, removed elsewhere, was of normal size.

ly, a large follicle may be present at either end of the base, which, since the internal components of the ovary are much softer than the outer, displaces and compresses the structures passing through the hilum to one side or the other without any indication on the surface that such a situation is present beneath it. Combinations and variations may be present, but they all indicate one fact: that the tough, inelastic, external coat of the ovary does not allow the deeply placed expanding follicles to reach the surface and forces them to exert pressure on every cell around them. Even should release eventually take place some damage may occur during such time as the growing follicle prevents the circulation from nourishing any part of the ovary. The peculiar, spiral arteries in the hilum may possibly provide for

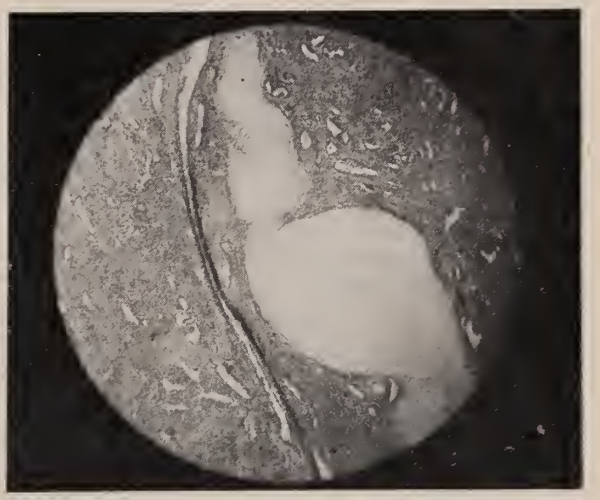


Fig. 2.—Section a little below the white line of the same ovary with a vessel curving around a regressing follicle.

this contingency by elongating around the follicle like a stretched spring, but they can be effective for transporting blood only up to the limit provided by the space in which they are ultimately left to function. In the conditions herein described, this space is practically non-existent. Undoubtedly an optimum pressure for the maturation of the follicle must

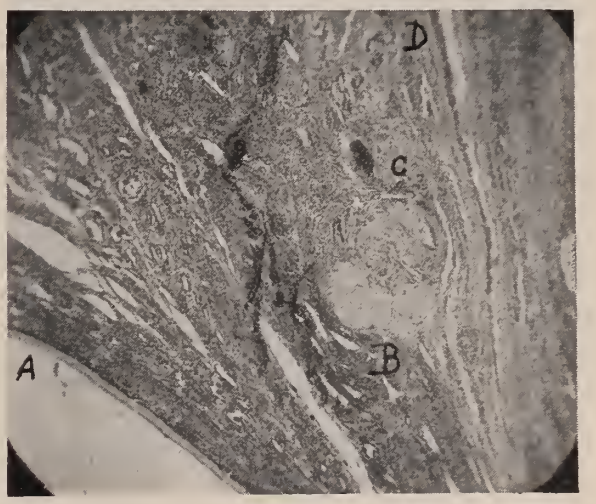


Fig. 3.—Section at about the same level as figure 2, showing how the ovarian stroma conforms to the contours of follicle A. A regressing follicle is seen at B with an obliterated vessel above it at C. A large vessel D narrows until it disappears between the greatest diameter of the follicle and the cortex which is not shown. Note how this vessel is further affected by the follicle B which causes a small curvature in it.

exist, above or below which proper ovulation does not take place, thus suggesting a plausible explanation for the occurrence of anovulatory cycles with the alterations in the endocrine sequence incidental to them.

The microscopic pathology confirms the effects of pressure on the vessels as they pass around a follicle, since the presence of one in the interior of the ovary materially affects the arrangement of the stroma, compelling it to conform to the contours of the cyst. In sections across the hilum extended vessels are rarely found because of their spiral nature, but beside a cyst immediately below, these have been lengthened and attenuated by its curvature to such an extent that they are straight and at

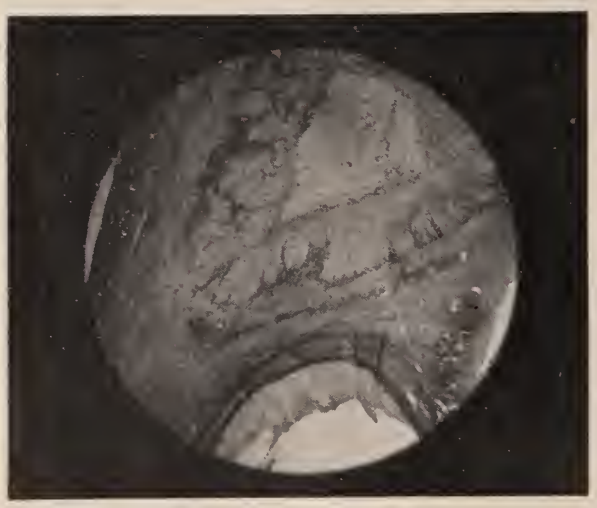


Fig. 4.—Section near the white line of another sclerotic ovary showing a corpus albicans between the cortex and another follicle. No vessels can be seen. This ovary probably could not have been preserved.

the greatest diameter of the follicle, the lumina, caught between the cortex and the cyst wall, are nearly obliterated. The remarkable suddenness with which the rich mass of vessels in the mesovarium dwindles at the level of the white line is thus accounted for. This must either temporarily or permanently interrupt the nutrition of large areas in the ovary, permitting the weeds of fibrous tissue to invade the garden of ovarian stroma. When a corpus albicans is in the hilum, bands of fibrous tissue reach out to the cortex on both sides, all forming with the regressing follicle a hard inelastic body across the hilum in which the vessels are enmeshed and occluded.

Further investigation will be required to support the validity of these opinions. Studies of injected specimens and serial sections, stained to demonstrate the various types of cells, should reveal much concerning the distortion of the entire circulation and innervation from the maturation of follicles at various positions in the ovary. Especially important is to determine if the vascular tree is versatile enough to adapt itself to the sequence of events within the ovary by providing a collateral circulation with sufficient rapidity and capacity, to supply the parenchyma affected by an enlarging follicle no matter where. This is not of great moment if the follicle is near the surface and either goes on to rupture or becomes a large cyst, but the continued effects of the presence of an unruptured or slowly regressing follicle beneath the cortex upon which it makes no impression may be quite another matter. In addition, the failure of these follicles to yield progesterone may alter the metabolism of the ovary itself. On several occasions I have had the clinical experience of noting the disappearance of ovarian pain and the apparent resolution of a palpable cyst after the administration of large doses of this substance.

What happens to an ovary after invasion of its coats is not known, as no one has had an occasion for re-examining these structures after the original laparotomy. Lynn and Maxwell[4] report dense adhesions after partial resection of the ovary, but that is a different procedure. The possibility of renewal of the fibrous coat cannot be denied although the result in Case 3 seems to disprove this.* Expansion of follicles in the same area is also probable, but if their maturation is unencumbered, no extension of the sclerotic process should occur. Estimations of the success of this procedure must as yet be based solely on the improvement of symptoms and on various manifestations of the maintenance of ovarian function.

ETIOLOGY

The etiology of ovarian inadequacy due to sclerotic or polycystic disease is more speculative than factual. An effort to determine that a correlation exists between ovarian activity and psychological processes has been made by Benedek and Rubenstein[5] but that it is a reversible reaction has not been fully demonstrated by students of psychosomatic medicine. Most of the structures of the body are functionally and organically affected through psychosomatic

*Twenty months after this operation she reported that she was pregnant.

mechanisms, so it is difficult to believe that the endocrine glands escape altogether. Certainly the development of fantasy life in the adolescent girl, the characteristics of her environment and the rich emotional and deep affective experiences associated with the intensification of her inner world must leave their mark upon the cellular components of the ovaries just as they do elsewhere. This is often manifested externally by disturbances in the menstrual cycle, such as amenorrhea, menorrhagia and intermenstrual menstruation brought on by the intense experiences of war, and, in an otherwise normal life, by factors enhancing the vehemence of individual feelings and mood changes which eventually mounts

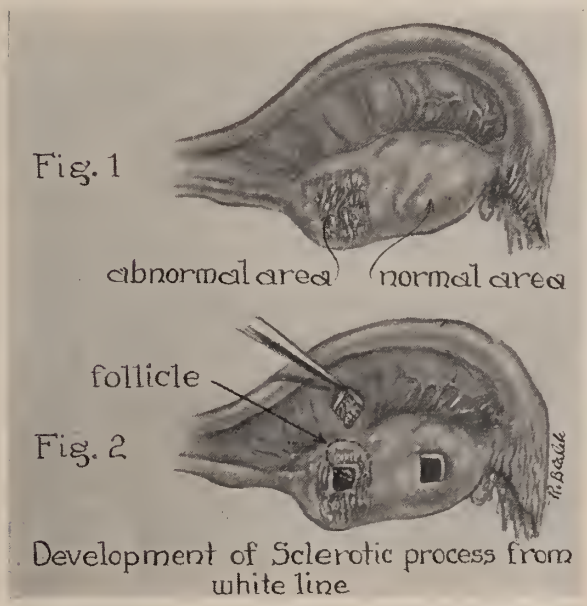


Plate II.—Ovary of 19 year old girl mistakenly operated for salpingitis and found to have appendicitis. Small squares of the cortex that were removed for section and the tense follicle beneath the abnormal area are shown.

to sustained or fluctuating emotional hypertension. Whether their effects can cause a functional disruption of the interglandular balance sufficient to derange the pituitary-ovarian correlation is, at present, a subject for conjecture. It seems more and more clear, however, that the impact of an hyperemotional psyche on the elaboration and correlation of hormones and the effect of hormones on the psyche can become a vicious cycle with such a crescendo that the co-ordination of both may be disorganized.

Another factor may be the tumultuous existence demanded of the cellular morphology of the ovary as contrasted with the relative peace and quiet attending the functioning of the other endocrines. The endometrium also is constantly alternating but is not exposed to the permutations to which the ovary is liable. In following the pituitary as the pacemaker of this endocrine synchronism, the ovary

Fig. 5.—Section of normal cortex removed from ovary illustrated in Plate 2. It is normally thin and the cells are not packed. x 32.

alone undergoes comparatively violent changes which subjects it to the hazards and distortions incidental to the variating physical forces of expan-

Fig. 6.—Section of sclerotic area of this ovary taken at the same level but over a tense follicle. Note the comparative thickness and the closely packed cells. x 32.

sion and contraction impinging on the intervening parenchyma and on each other from separated areas in the same closed space. When the sclerosis is pronounced I question if any internal or external stim-

ulus is capable at this stage of having the power to insure the rupture or absorption of a follicle surrounded by such an inflexible and unyielding encasement, leaving the ovary unimpaired.

A clue to the more immediate problem of the formation of this encasement was furnished when a twenty year old girl was operated through a midline incision for salpingitis and found instead to have subacute appendicitis with the appendix deep in the pelvis. The ovaries were examined and the right was sclerosed for only half of its length. The thickening began abruptly at the white line, extended uniformly to the free border and medially ended just as suddenly at about the middle of the ovary. Small squares were removed from each part of the cortex at the same level and then the sclerotic part was opened at the white line where a tense follicle was found. In the sections the cortical epithelium seemed to be alike but the fibrous layer beneath the normal was much smaller in diameter and the cells much less closely packed than the other. Naturally without considering the endocrine and emotional factors, there is not enough ground here from one case for a conclusion. It does bring up the question of the reaction of the cortex to an abortive follicle, a matter so far entirely unconsidered. Thus, the character of the ovarian capsule, modified by its previous vicissitudes and trophic condition, may be just as important as the endocrine, emotional and positional factors in determining the future course of a follicle: if it is to maturate normally and rupture, become a large cyst, or enlarge to a certain point and do neither.

Historical Background

DeWees,[6] in 1826, eloquently summarized the opinions of his time concerning the therapy of affections of the ovary which could not be successfully refuted today. In the chapter "Of Diseases of the Ovary" he states: "These bodies are more frequently diseased or disordered than the uterus itself; but neither the diseases, nor disorders to which they are liable, are of such dangerous consequence. They are, however, for the most part, more occult than the other diseases of the genital system, if we except those of the tubes. Hitherto no remedy has been discovered that has a decided operation on these bodies; consequently, they are very little under the control of remedies, whose operations are felt upon the general system or of those which may exert an influence on certain portions of it. It is probable that, during an active state of disease, as inflammation, the usual remedies for fever, or this local affection, may be availing, as bleeding purging, low diet, blistering, etc.; but here, perhaps, the power of the materia medica ceases; for no one instance, with which we are acquainted, would lead us to the conclusion, that any remedy has removed a disordered condition of these parts.

"They seem to be removed so far from the general sympathies of the system; so insulated in position; so independent in function; that the common agents for the removal or control of disease seem to waste themselves in unavailing attempts to influence their actions, or to modify their affections. Who flatters himself that he has removed a dropsy, resolved a scirrhus, or interrupted a suppuration in these bodies? We believe, if he be candid, none will confess he has. Little more than at present is ascertained, than that they are very liable to disease, and but very little susceptible of cure. But, must we so humble the powers of the healing art, as to declare, we never shall be master of their diseases? Certainly not. Advances are constantly making towards at least the improvement, if not the perfection, of the art; and we are now and then made acquainted with substances, which have a specific action upon certain tissues of the human body. The time may then arrive when we shall be in possession of a remedy whose agency shall be confined to the ovaries alone, or to similar organizations, if such there be in other portions of the system. But until then, unfortunately, the victims to affections of these important parts must remain contented with the solace which palliatives may afford."

Defeat has never been admitted for advances are being made constantly "toward the improvement, if not the perfection, of the art". Resection of the cysts was tried and abandoned about fifty years ago.[4] To wait in hopeful anticipation for a condition such as amenorrhea associated with inadequate ovaries to end spontaneously, suggests frustration instead of the more energetic solution of the intervention in Case 7.

About the turn of the century and for many years thereafter ovarian transplantation[7,8,9] was done instead of extirpation in tubo-ovarian disease, but the necessity for this has been obviated by tubal ligation which prevents the cystic ovarian degeneration

incidental to salpingectomy.[10] The ovarian parenchyma survived only around the edges of the transplants, and then for just a short time.

Introzzi,[11] Wood and Curz,[12] Hanzanilla[13] and Bigelow[14] attacked the circulation and innervation in the ovarian and broad ligaments along the course of the ovarian artery and the tubo-ovarian branch of the uterine artery, but while this method may bring relief from pain by dividing the nerves, it cannot improve the circulation of the ovary because these structures are behind, and not at the location of the obstruction which is in no sense relieved.

Direct attack on the sclerotic and cystic ovary with considerable success has recently been accomplished. Bonney[15] urged the total enucleation of any type of non-malignant cyst, including dermoids, from polycystic ovaries, but makes no mention of cysts without ovarian enlargement. He also pleaded fervently for the retention of both ovaries, and objected to impairment of them from any quarter including x-ray. Siegler[16] believes that wedge shaped resections of the ovarian cortex, removing one to two-thirds from both ovaries, bring the best results. Stein and Cohen[17] thus report the restoration of normal ovarian cyclicity in 25 of 28 women. This method was carried to complete decapsulation or decortication by Reycraft[18] who obtained normal function in 5 of 6 cases of amenorrhea and pregnancy in one case.

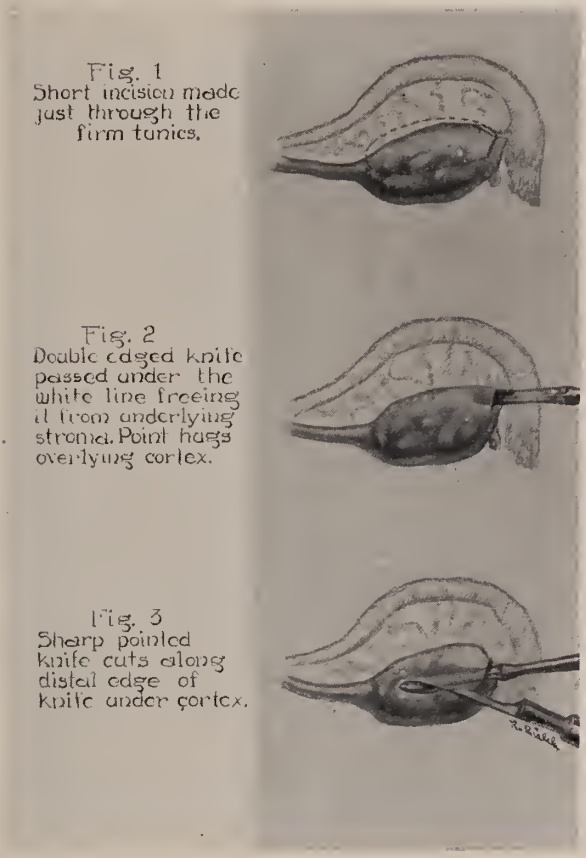


Plate III.—Technique of operation when the ovary is not enlarged. If the ovary is cystic, the cysts, regardless of their size, should be attacked first and then the hilum explored.

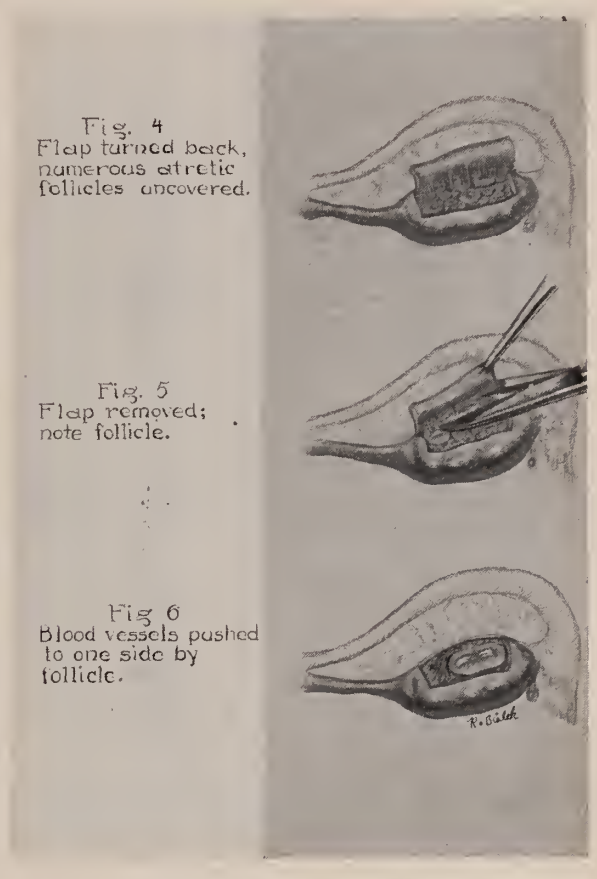


Plate IV.—Turning the flap of the capsule back exposing the ovarian stroma. Follicles cannot always be seen, but if present, they can easily be palpated. The flap should not be removed too close to the mesovarium.

Bailey[19] splits the ovary wide open, controlling bleeding by mattress sutures and leaving the raw surfaces exposed. He was successful in 13 of 17 patients with amenorrhea, pregnancy occurring in one case. In all of these methods every cyst that can be seen is ruptured with the intention of assisting the remaining follicles to maturity by facilitating their approach to the surface.

The objection to these latter procedures is again that the problem is not attacked as close to the source

of the trouble as possible. If removal of large sections of the cortex is desired, it can be achieved much more easily by working from the hilum to the free border than in the reverse direction. There will be much less bleeding, vessels will not be divided indiscriminately, and the cysts at the hilum, where

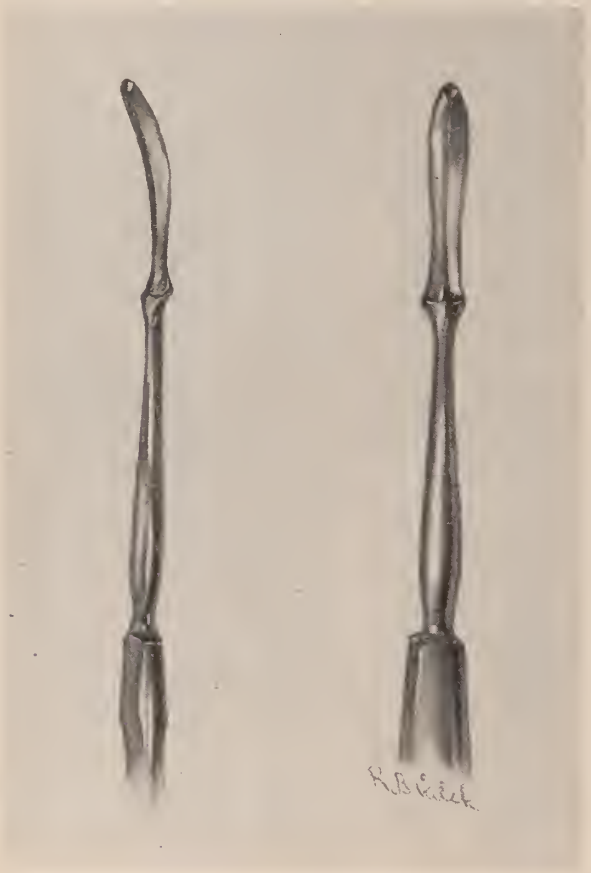


Plate V.—The Zinn tonsil knife with sharp rounded end and edges which is well suited for undermining the ovarian capsule.

they are more compact and crowded, will not be overlooked and can be removed or punctured. Above all, since the pathological background is more intelligible, it replaces empiricism with a definite therapeutic plan that may include any or all other ideas.

TECHNIQUE OF OPERATION

Exploration of an ovary as I am performing it violates one of the principal tenets of abdominal surgery in that it leaves surfaces uncovered by peritoneum. Yet it may not be as irregular as at first appears. Adhesions to the normal ovary are seldom if ever found, although raw surfaces of about the same character are present on one or the other for sometime during each menstrual cycle. Besides, the ovary is usually left in its normal position against the pelvic wall with the tube bending over it so there is little opportunity for contact with either the omentum or intestines.

All the structures attached to the ovary must be clearly defined. In the case of cirrhotic ovaries and those containing cysts without external indication, these are readily apparent. When the ovary is polycystic or contains one large and possibly several small cysts, the mesovarium and hilum is often hidden by the overlying tube and the many adhesions distort and rotate the whole mass, sometimes making their identification troublesome.

The ovary is held with the fingers, since because of its friability, instruments for grasping it or clamping the mesovarium cannot be employed. Only the dissecting knives and a needle or small pointed hook for opening the cysts are used. An incision is made at one pole of the ovary, beginning just a little below the white line, extending down the ovary about two-thirds of the way to the free border. A small blade must be used, and one must be careful that the knife goes just through the tough tunics and not into the stroma. This is done by cutting not quite through the capsule with a small scalpel, holding that incision open under tension by pressing down both poles; and then with the double-edged knife held in the same plane as the cortex, making a few strokes with its round cutting end until it sinks beneath the cortex. Because the flat back of the end of the knife pushes the stroma down and away from its covering there is little bleeding and the blade is accurately placed between the ovarian capsule and its contents. Holding the curved sharp end firmly against the under surface of the cortex, the knife is passed almost entirely across the ovary and finally brought out near the other pole. As the sharp end of the dissecting knife goes forward under the cortex it will meet firm resistance where corpora albicantia and fibrous bands are encountered, and these must be penetrated without hesitation. The edge of the knife near the free border is then slightly elevated or rotated outwards, lifting the cortex from the stroma, and an assistant cuts through the capsule over this edge with a small scalpel. The assistant cutting the tunics over the knife will be amazed by the hardness and the effort required to divide this structure as it is held up by the edge. During these manipulations the ovary must be kept still without traction on its attached structures.

Any follicles seen or felt can then be opened with a pointed hook or cutting-edged needle. If one constantly bears in mind that the tissues in the ovary are so arranged that their divisions run from the hilum to the free border and probe in that direction only, there will be little destruction of vital cells. On a small scale it is exactly like a muscle separation process. The palpating finger can be placed directly into the aperture made in the cortex, and the whole contents of the ovary with reference to the presence of cysts can easily be made out. The fluid and sometimes parts of sacs, even as far down as the free border, can be removed. If there be many cysts of the same size it may be advisable to open them through the cortex but in each case the opening must be adequate. That part of the cortex which has been elevated may then be removed but it should not be cut too close to the mesovarium. The uterine-ovarian ligament is inspected. In the physiologically inert ovary this ligament frequently is sclerosed, sometimes all the way to the uterus. It is opened by a small incision just through the peritoneum, beginning at the uterine end, then inserting a probe under the peritoneum down to the opening in the ovary, and cutting over the probe. According to Westman[20] this ligament contains smooth muscle and vessels which play an important role in the movements of the ovary that assist in the delivery of the ovum into the tube after rupture of the follicle.

The polycystic ovary may be managed best by opening the cysts first and afterward exploring the hilum. The cysts should be emptied and some of the wall resected to prevent them from refilling. This also allows the interior of the cyst eventually to become the exterior of the ovary, thus duplicating in a limited fashion nature's method for the disposition of the normal follicle. Bleeding can be controlled by suturing along the cyst edges with fine catgut, but the openings should not be closed. The hilum can then be explored and almost always many small follicles will be found there too. One will be agreeably surprised how much of an ovary will be obtained from what at first seemed a useless and hopeless organ.

The control of bleeding is not difficult. As yet I have not had to remove an ovary because of unmanageable hemorrhage. The dissected part of the capsule should not be removed too close to the mesovarium as it is necessary to take away just enough to leave an interval in the cortex along the length of the ovary. One need not hesitate ligating vessels because the blood supply up to the ovary is more than ample. Fine catgut on atraumatic needles should be used. Occasionally there is some bleeding from the stroma along the distal edge of the open cortex and no effort should be made here to clamp vessels because the tissue is too friable. Instead, sutures should be placed in the capsule along this edge which will draw the poles of the ovary slightly together, to be tied just tight enough to produce the necessary compression. The ovary will be somewhat distorted but the fine catgut will not last long enough to make this permanent if the aperture in the cortex is maintained. Recently I have not taken away that part of the capsule removed from the stroma and have not had to tie any vessels, but I think it does not leave sufficient space for follicles to expand. There need be no hurry. The ovary should be returned to its position and left there while something else is being done before vessels are tied, and frequently bleeding will cease spontaneously, probably through retraction of the spiral vessels. Coagulation, large clamps and heavy catgut will defeat the objectives by inducing scarring. The utmost gentleness, delicacy and respect for tissues must be observed.

One must not let the grossness of the lesion discourage or interfere with the orderly progress of the exploration. The transformations possible, after the internal pressures and circulatory changes have finally attained an equilibrium, cannot be predicted. Here a sympathetic and compassionate surgical artistry is required, which, if wanting, can barter the permanent psychological welfare for a temporary physical security.

COMMENT

Since the dawn of history sterility has been a source of such anguish as to drive women to all manner of grotesque, fantastic and bizaare instrumentalities for relief. These have included means of every imaginable kind, from prayers and incantations to shrines, drugs, superstitions and charms of any description, and all having fanatical adherents. Undoubtedly pregnancies have followed some of these efforts but whether they have a true connection can only be surmised. Certainly conception has followed many operations and non-surgical procedures carried out especially for this purpose, but it is not my intention to include this procedure with

them except to direct attention to it as another factor in sterility amenable to therapy.

The pursuit of endless youth has been another continuous quest and here again I have no idea that any recovery of ovarian function will postpone the inevitable climacteric. Despite the result in Cases 5 and 9, I feel that the menopause will arrive at the average age, if not before, and believe any benefits will come from being more comfortable until that time.

Still one cannot help but wonder what the corresponding changes are in the testicle, not with any idea of rejuvenation, but for creating naturally the desirable therapeutic responses so often obtained from the administration of testosterone propionate and its allied compounds during the later life of the male. While no cyclicity is present, the activity required by spermatogenesis and the psychosex hormone interdependence may have more effect on the vascular system as it makes the transition from the cord into the testicle than is commonly supposed. We do know there are alterations in size and internal pressure in the testicle, for that is a common experience. At any rate, its many aspects would make a fascinating subject for study.

There is hardly any question that a full understanding of the physiological necessity for two intact ovaries is not sufficiently widespread among gynecologists. The number of ovaries brought to the pathological laboratories of most hospitals attests the soundness of this statement. Everyone has seen young women who have had one ovary, one ovary and tube, or both tubes removed in youth return in any time up to ten years later long before the menopause with a variety of symptoms indicating ovarian dysfunction, frequently with discomforts sufficient to require the removal of what is left of their generative organs. This usually becomes manifest between the ages of 30 and 35 when one ovary can no longer carry the sex hormone burden; or, if bilateral salpingectomy has been done, the minute cysts which destroy the hormone producing cells render the ovaries similarly ineffective at this age. Many of these ovaries so carelessly and hastily removed could have been retained and their excision is less assurance that secondary operations will be required than if they had been considered with more deliberation and the aim that their function might be preserved.

The eagerness and alacrity with which anything promising relief is seized upon by those formerly tranquil, but now sensing a mysterious ascending threat to their psychodynamic stability, is clear evidence that ovarian inadequacy before the natural climacteric is no light matter and one the masculine mentality grasps only with the greatest difficulty, if at all. Whether the procedure I have outlined will eventually prove satisfactory or become more of academic interest than practical usefulness remains to be seen, but I do believe it will at least indicate that successful exploration of the ovary is feasible.

SUMMARY

It would seem, therefore, that an inquiry into the condition of the ovary goes further than a casual inspection of its exterior and should become a part of every laparotomy where these organs are within reach. It is likely to reveal much more than what is at first perceptible and a careful, delicate search can be rewarded by clinical improvement entirely out of proportion to the visible unimportance of the changes accomplished. There is much to gain, and with prudence and proficiency very little to lose. The disposal of undesirable cysts, whether large or small, achieved in a manner which retains the ovary as a functioning unit surely can do no harm.

The opportunity for the ovary to elaborate hormones, adjust its internal pressure, release vessels, nerves and muscles from strangulation and provide an additional surface for the maturation of follicles deep in the stroma are afforded by exploration of the ovary. Restoration of some of the ovarian functions and release of intra-ovarian tensions can bring relief from pain and improvement in the somatic and psychic phenomena resulting from deprivation or imbalances in the sex hormones until the menopause. Occasionally sterility is relieved. Within reasonable restrictions which should be clearly understood and accepted, the effect is to give the ovary a fresh start, with the leading extrinsic etiological factors perhaps no longer in existence.

REFERENCES

1. Farre, Arthur: The Uterus and Its Appendages; Cyclopedia of Anatomy and Physiology, Edited by R. B. Todd, **5**: Supplement 1859, p. 548.

   Searching the anatomies for a description of the white line, I found only two of the six most widely used made any reference to it, and only one, Piersol, mentioned Farre. Of the three leading medical dictionaries, all made the error of crediting its

first description to Frederick John Farre, an ophthalmologist, instead of his brother, Arthur. This line was studied later by Waldeyer (Das Becken, Bonn, 1899: p. 507) who pointed out that it was the junction between the epithelium of the mesovarium and the mucous membrane of the ovary. It corresponds in general to the limits of the hilus of several other authors.

2. *Idem*—p. 556.
3. Jacobson, P.: The Psycho-Endocrine Origin and Therapy of Spontaneous Recurrent Hemorrhage, *Va. Medical Monthly* **72**:73 (February), 1945.
4. Lynn and Maxwell: Pelvic Neoplasms; D. Appleton & Co., 1922, p. 329.
5. Benedek, T., and Rubenstein, B. B.: Psychosomatic Med. **1**:245 and 461, 1939.
6. DeWees, W. P.: A Treatise on Diseases of Females, H. C. Carey and I. Lea, 1826, p. 247.
7. Estes, W. L., Jr.: Ovarian Implantation, *Surg., Gyn., and Ob.* **38**:394 (March), 1924.
8. Thorek, M.: The Practicability of Ovarian (Auto, Homo and Hetero) Transplantation (With Histologic Proof), *Endocrinology,* **14**:265 (July-August), 1930.
9. Von Groff: Operative Treatment of Female Sterility. *Journal of Iowa State Medical Society* **26**:361 (January), 1936.
10. Jacobson, P.: Further Experience with Tubal Division in Salpingitis, *Va. Medical Monthly* **70**:205 (April), 1943.
11. Introzzi, A. S.: A New Surgical Procedure for the Treatment of Sclerotic Ovaritis, Its Basis, Technique and Results, *Bol. Inst. de Clin.,* Quir **6**: 277, 1930.
12. Wood, W. J., and Curz, M. H.: Conservatory Surgery in Gynecology: Indications and Results in Lesions of the Adnexa in Sclerotic Inflammation of the Ovaries, *Boletin de la Sociedad de Cirugia de Chile* **12**: 159, 1934.
13. Hanzanilla, M. A.: Etiopathogenesis and Treatment of Sclerotic Inflammation of the Ovaries, *Cirugia y Cirujanos* **2**:299, 1934.
14. Bigelow, W. A.: A Study of the Results Obtained by Section of Ovarian Vessels and Adjoining Tissue in the Relief of Certain Types of Pelvic Pain, *Canadian Medical Association Journal* **47**:233 (September), 1942.
15. Bonney, V.: The Fruits of Conservatism, *Jour. Ob. and Gyn. of the British Empire* **44**:13, 1937.
16. Siegler, S. L.: Fertility in Women, J. B. Lippincott Co., 1944, p. 357.
17. Stein, I. F., and Cohen, M. R.: Surgical Treatment of Bilateral Polycystic Ovaries, Amenorrhea and Sterility. *Amer. Jour. Ob. and Gyn.* **38**:465, 1939.
18. Reycraft, J. L.: Surgical Treatment of Ovarian Dysfunction, *Amer. Jour. Ob. and Gyn.* **35**:505, 1938.
19. Bailey, K. V.: The Operation of Extroversion of the Ovaries for Functional Secondary Amenorrhea, *Jour. Ob. and Gyn. of the British Empire* **44**:637, 1937.
20. Westman, A.: Investigations into the Transit of Ova in Man. *Jour. Ob. and Gyn. of the British Empire* **44**:28. 1937.

Quarterly Review of Pediatrics.

The first issue of this Review will appear in February with others following in May, August and November. Each number is thoroughly indexed and a cumulative index for each volume is included in the November issue. The "Bookshelf" department reports on all new books the pediatrician should know about, as soon as they are brought to editorial attention.

In the Foreword of the first issue, it is stated "The prime function of the Quarterly Review of Pediatrics is to make it feasible for the busy physician to keep abreast of the most recent progress in all branches of pediatrics with a minimum of time and effort. The Quarterly Review of Pediatrics serves also as an authoritative guide to original sources when more detailed information is desired.

"From a great diversity of national, state and special journals in this country and abroad the editors select for abstracting, as promptly as possible, all articles of significance which deal with disease conditions, health, growth, and mental welfare, from infancy through adolescence. These abstracts are prepared by trained bibliographers, mostly physicians."

Dr. Irving J. Wolman of the Children's Hospital, Philadelphia, is Editor-in-Chief.

PUBLIC HEALTH

I. C. RIGGIN, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for December, 1945, as compared with the same month in 1944, and for the period of January through December, 1945, compared with the same period in 1944, follows:

	Dec. 1945	Dec. 1944	Jan.-Dec. 1945	Jan.-Dec. 1944
Typhoid and Paratyphoid	8	12	170	132
Diarrhea and Dysentery	112	567	7,102	6,813
Measles	238	43	1,625	17,116
Scarlet Fever	462	347	4,252	2,969
Diphtheria	101	35	580	329
Poliomyelitis	6	14	335	756
Meningitis	10	26	215	515
Undulant Fever	2	0	32	36
Rocky Mountain Spotted Fever	1	1	99	81
Tularemia	9	14	50	58

HEALTH EDUCATION AND THE PHYSICIAN

Formal public health education is a comparatively modern activity. State Health Departments, the U. S. Public Health Service, organizations such as the National Tuberculosis Association, the American Cancer Society, and the National Foundation for Infantile Paralysis, certain large life insurance companies, and commercial interests, including baking, dairy, meat, and the paper drinking cup, have been publishing or circulating for several decades informational material on disease prevention and personal health maintenance. Moreover, the tempo in these fields notably has increased in the more recent years.

To such press releases, magazine articles, health bulletins, and motion pictures, must be added public addresses on the subject of personal well-being by the orthodox and unorthodox, books by approved and unapproved authors, and the more enticing sales appeals for this, that and the other that reach the millions daily over the air waves.

Despite these efforts, most persons if well, even though not buoyantly so, are prone to be resistant to all but the commercial presentments. They let well enough alone until they become consciously ill, then send for the family physician from whom they expect immediate cure, even though the complaint may be a long, smoldering one.

Without deprecating the efforts of professional public health education, the fact remains that the most powerful influence in this activity is represented by the personal interest of the practicing physician. To him is opened an unusual opportunity to spread the gospel of personal health. However, except for a few physicians who have specialized in this line to their marked financial benefit, the medical profession has exhibited no particular enthusiasm for it.

It is quite true that the average physician during the war years and even today, is fully occupied in attending cases of acute illness, and little if any time for professional evangelism has been available. Assuming that conditions will become more normal, the general practitioner, if willing to do so, can do justice to this activity. Examination blanks covering this type of examination, as is well known, are readily available through the American Medical Association and State societies.

To render this type of service, the general practitioner must become an ethical salesman, which is somewhat against his natural inclinations and professional viewpoint. Since his first year in medical school he has been educated to the idea that his services must be *sought*. Therefore, for him to suggest as a matter of routine to his patients of thirty-five or older that they come to his office once or twice a year for an examination and give him money when they have no pain nor illness will be a departure.

Replying, it may be said that such physicians who follow this line of professional activity will be rendering a scientific service. The family doctor will indicate to his patients that the periodic examination is but a protective step against preventable disease and premature dissolution. He will emphasize the value of an early diagnosis for actual and suspected illness. He will suggest a proper living regimen, based on the individual findings of his investigations.

If this attitude were accepted generally by the practicing physicians, especially when the present demands of their time on their curative efforts ease somewhat, the profession should be able to detour many serious illnesses, succeed in blocking a large number of premature funerals, and by so doing afford professional skill its great chance at the last real enemy of healing art—man's own indifference of his personal welfare.

MAKE MEASUREMENTS METICULOUSLY

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

"She looks all right. Why should she have had any trouble at delivery?" That was the question of a physician following the difficult delivery of a patient whose pelvis had not been measured. This misleading observation must have been one of the inciting causes for the statement that "human looks" —are "deceiving".

What value is attached to so-called pelvimetry? Do the measurements afford any information? Possibly doing the measurements makes the patient feel that she is getting something for her time and money. Certainly it makes the physician feel that he knows more about the patient's physical make-up.

It is rather infrequent that the textbook-normal measurements are found. When it does occur, that patient is more apt to be placed in the justo-major group. In order for the textbook-normals to be established, it was necessary to have as many above as below the established figures. When the normal is definitely reduced the diagnosis may be "generally contracted" or classed as "justo-minor". Many variations may occur between the upper and lower limits of normal—any one of which may indicate an abnormality and produce a problem at the time of delivery. Ingenuity is taxed when there is a debate as to whether delivery will occur through the passage provided. At this point the interpretation of the relationship of the measurements to each other may be of extreme value. The fact that a large fist goes between the tubers or that the promontory cannot be reached may be misleading. The wide tubers may mean rickets and the deep diagonal conjugate may mean that the mid pelvis is narrow.

Multiparity may increase, rather than decrease, the indications for pelvic measurements. It is embarrassing to find that previous deliveries have produced pathology or that new growths have appeared when a multipara, who has not been measured, presents herself in labor. In this case the measurements should not have been made purely for dimensions but rather to enforce an examination, at which time, the measurements could have been recorded easily. Previous babies may have been small. Succeeding pregnancies may result in progressively larger babies. If the patient is seen in time, there is no substitute for pelvic measurements; if seen late, making an internal examination may be impossible.

The routine use of x-ray pelvimetry is not believed justified; it may give valuable information in doubtful cases. It may be used to advantage when there is: a history of a previous difficult labor; an overriding head; a contracted mid pelvis; in locating the placenta in suspected praevia. Use of the x-ray is always dependent on its availability as well as on the ability to interpret the findings.

Discouraging incidents may follow well studied cases in that patients will fail to deliver when the measurements indicated that they should; and deliver, when they should not. All cases should be measured for the reason that an occasional life will be spared through a resulting, precise prognosis.

There are some physicians in Virginia who will not accept patients for delivery who have not had prenatal care. The time may come when a patient will have difficulty in securing the services of a physician unless her pelvis has been measured and diagnosed for this particular pregnancy.

MEDICAL SOCIETY OF VIRGINIA
Report of Delegates
on
Meeting of House of Delegates of American Medical Association

CHICAGO, DECEMBER 2-5, 1945

After a delay of some six months, due to travel restrictions incident to the War, the House of Delegates of the American Medical Association assembled in Chicago on December 3, 1945. By holding almost continuous sessions, the House was able to complete the business before it, and to adjourn at the end of December 5th.

The usual addresses by the President, President-Elect and Speaker of the House were delivered, and have been published in *The Journal*. These, together with numerous resolutions dealing with questions of social, scientific and economic significance, were referred to various reference committees for consideration, before being brought to the House for final action.

Of major importance was the adoption of the Fourteen Point Constructive Program for Medical Care, which had been proposed jointly by the Board of Trustees and the Council on Medical Service and Public Relations as of June 22, 1945. It defines the position of the American Medical Association with regard to questions of controversial nature now before the medical profession and governmental bodies, and furnishes a platform upon which all sections of the medical profession may unite for future activity. This program is presented and clarified in a special article by Louis H. Bauer, M.D., entitled "Medical Care for the American People", and published in *The Journal of the A.M.A.* for December 1, 1945, p. 945-948. Thoughtful perusal of this article is urged upon every physician.

Of especial interest was the addition to the present list of scientific sessions of a section on General Practice, with a representative from the section in the House of Delegates. The necessary changes in the by-laws and constitution were proposed, and it is expected that the section will be in operation at the next meeting of the association. It was further recommended that a new by-law be adopted providing for two meetings of the House of Delegates annually, instead of one, as at present. Thus, the policies of the association with reference to urgent problems confronting the association may be promptly expressed.

As had been done previously, the House of Delegates expressed its disapproval of compulsory sickness insurance, as proposed by the new Wagner-Murray-Dingell bill now before Congress. It also went on record as opposing the provisions in the Pepper bill for continuing and expanding the functions of the Children's Bureau, and recommended that this agency be separated from the Department of Labor, to which it is not properly related.

The House of Delegates was most favorably impressed by an address by Major General Paul R. Hawley, Acting Surgeon General of the Veterans' Administration, outlining plans for enlisting the help of civilian doctors in the care of veterans. This address, published in *The Journal of the A.M.A.* for December 22, 1945, p. 1192-1194, is most informative, and should be read by everyone interested in the medical care of veterans.

A number of resolutions touching upon the internal workings of the association were introduced. These attempted to define more clearly the authority and functions of its trustees, councils, officers, bureaus and employees. Though no important action resulted, the attending discussions brought to light the sentiments of various groups within the association toward its management, and will doubtless prove helpful in shaping the future activities of the various agencies. The extremely important functions of the Council on Medical Service and Public Relations was emphasized.

For the office of President-Elect, Dr. Harrison H. Shoulders of Nashville, Tennessee, for many years Speaker of the House of Delegates, was chosen, and as Vice-President, Dr. William R. Molony, of Los Angeles, California, long a member of the House of Delegates. Among those elected to fill vacancies on several Boards and Councils was our own delegate, Dr. Walter B. Martin, who was elected to the Council on Medical Service and Public Relations for a term of three years.

The next annual session of the association will be held in San Francisco, July 1-5, 1946. Plans are underway for the centennial celebration at Atlantic City in 1947, and St. Louis was selected for 1948.

WALTER B. MARTIN, M.D.
J. MORRISON HUTCHESON, M.D.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. P. M. CHICHESTER, Abingdon
President-Elect—MRS. J. E. HAMNER, Petersburg
Recording Secretary—MRS. NATHAN SCHUMAN, Alexandria
Corresponding Secretary—MRS. L. C. BRAWNER, Richmond
Treasurer—MRS. REUBEN F. SIMMS, Richmond

Mid-Year Report of the President.

As President of the Woman's Auxiliary to the Medical Society of Virginia, it is with pleasure that I submit the following report.

At the annual meeting the question was brought up of endorsing bills, as a component organization, on the Calendar of the Woman's Council of Legislative Chairmen of State Organizations.

Letters were written immediately to the President of the Medical Society and the members of the Advisory Council to the Auxiliary with regard to the licensure of practical nurses in Virginia and the prevention of pollution of streams in the State.

At the meeting of the Council of the Medical Society it was moved and carried that the bill regarding the licensure of nurses be referred to a Committee to confer with the State Board of Nurse examiners for further study, with instructions that they submit their recommendations to the Council at its Mid-winter meeting. The Medical Society approved backing the bill for the prevention of stream pollution.

On October the 31st a list of officers and committee chairmen was sent to Miss Margaret Wolfe, the Executive Secretary of the Woman's Auxiliary to the American Medical Association. She forwarded these to the National Committee Chairmen, who in turn were to forward material to our State Chairmen.

The order was then placed for the stationery. It was promised at the earliest possible date. It was received on December 13, and sent to officers, chairmen and local presidents on December 14th.

Letters were written to the presidents of the local auxiliaries, asking for their lists of officers and committee chairmen.

At the suggestion of the retiring president of the Williamsburg-James City Auxiliary, a former president who had returned to the city was asked to help this group resume meetings interrupted by the war. We have had no report of this.

The Loudoun-Fauquier Auxiliary has not been able to conduct meetings recently.

I have been unable to get a report of the Warwick County Auxiliary work.

The reports of the other groups show varied, useful and interesting work. The social, philanthropic and educational phases of the work are being carried on well in most cases. It is hoped that every auxiliary will have a philanthropic project with medical significance and continually add to our store of knowledge that we may be helpful allies to the medical profession and at the same time serve the best interests of the public.

One of the best ways to be informed is to study the *Bulletin* and *Hygeia*.

Because of her deep interest in this, Mrs. Clyde West, a past President, agreed to be chairman of the *Bulletin*. Her goal was that of our national organization, every member a subscriber to the *Bulletin*. She asked approval of writing to every member, enclosing a self-addressed envelope. Acting for you and with appreciation, I approved this. The monetary outlay was small and the response has been most gratifying. We are asked to continue to give our efforts to the major projects for the year—Juvenile Delinquency and Physical Fitness. Much thought and study is being given both problems.

Dr. Philip S. Smith, Chairman of the Advisory Council to the Auxiliary has been on the interim study committee of the Virginia Advisory Legislative Council to make a thorough study of existing conditions of medical needs and facilities in Rural Virginia. He wrote a brief summary of the recommendations of the Committee for the Auxiliary page of the VIRGINIA MEDICAL MONTHLY.

Dr. I. C. Riggin, Commissioner of Health was also on the committee. He will talk to us today on Rural Health and Prepaid Medical Care Plans.

Your president and president-elect attended the second annual Conference of State Presidents and Presidents-elect and National Chairmen of Standing Committees in Chicago on December 5th and 6th, 1945, in the Knickerbocker Hotel. It was educational and inspiring.

The December *Bulletin* is the Conference issue. Will you please read carefully the proceedings, ad-

dresses and recommendations

The Auxiliary was urged to keep up its good work of augmenting the work of the physicians, to understand his work, to help him by understanding and talking over his problems.

It is imperative that we study and give time to legislative bills to become a force in effecting much good legislation.

Study A. M. A. 14 point program.

Life is a succession of opportunities. Let us grasp them.

MARIE C. CHICHESTER.

Death Claims Approximately 4,015 Doctors.

Death claimed approximately 4,015 physicians during 1945 as compared with 3,415 the previous year, according to the January 19 issue of *The Journal of the American Medical Association.*

On the basis of an analysis of 2,962 obituaries published in *The Journal* during the year, it was found that the average age at death was 65.3, the same as in 1944. The majority of the physicians—494—died between the ages 70 and 74.

Heart disease continued to lead the causes of death among physicians. Coronary thrombosis and occlusion accounted for 655 deaths, 246 occurring between the ages 60 and 69. Cancer and tumors accounted for 296, and pneumonia claimed 145 doctors.

Of the 25 suicides reported, 11 were the result of bullet wounds, three of a cut artery and three of drugs. There were 87 accidental deaths and 33 of them involved automobiles.

Among the decedents were 256 who had been teachers in medical schools; of whom 97 had reached professorial status. There were eight deans, one of whom had also been president of a medical college, two principals of a high school, two teachers in public schools, one of whom had been head of the business and practice department of the city's high schools, and 78 members of education boards. One hundred and forty-four had been health officers.

The 2,962 *Journal* obituaries included 116 physicians who were killed in action during World War II and 118 who died while in military service. Nineteen physicians lost their lives in the Pacific area, 13 in Germany, 12 each in the European Theatre of Operations and in France, and 11 in Okinawa, including six who were lost in the attack on the *Comfort.*

Of the 118 physicians who died while in military service, aircraft accidents caused the deaths of 22 and vehicle accidents of 10. Heart disease accounted for 25 deaths, 12 of which were attributed to coronary thrombosis. Cancer caused 13 deaths.

The 116 deaths classified killed in action give an average age of 33.0, while the 118 who died while in military service average 40.1. By combining the two, an average age of 36.6 is noted.

Of the seven U. S. Public Health Officers whose deaths were recorded, one died when he slipped on the Jacob's ladder while assisting wounded aboard ship and one when his ship was destroyed in enemy action.

Schenley Laboratories Commended.

Special commendation of its "splendid cooperation and untiring efforts" in the production of increasing quantities of penicillin vitally needed by the Armed Forces through the war period has been directed to Schenley Laboratories, Inc., in an official acknowledgment signed by Col. H. T. Marshall, of the Army Medical Purchasing Office, Army Service Forces, Office of the Surgeon General.

Schenley Laboratories, Inc., a subsidiary of Schenley Distillers Corporation, began pilot plant operations in 1943 after exhaustive laboratory research on penicillin, and subsequently launched production of Penicillin-Schenley on a commercial scale early in 1944, in its plant at Lawrenceburg, Indiana. Schenley Laboratories, Inc., is one of only 22 commercial producers of penicillin in North America.

Editorial

The Forgotten Man

THE new year would have found the editor's desk reasonably clean had there not been a number of letters from doctors in the army of occupation. Not knowing what to do about them, we have simply let them lie, where each day they look at us reproachfully and cry out about injustice. One doctor writes that he is not a regular army doctor. He was not drafted, but came into the army by his own will, as a volunteer to fight for his country when it needed him. He has spent 18 months in the army, 12 months overseas, 127 days of which were continuous combat days in the Siegfried Line, Battle of the Bulge, Remangen Bridgehead and Central Europe. Now that the war is over he feels that he has done his duty, but after all those days of bloody misery, he has been forced into the Army of Occupation. Such men feel that they are deteriorating mentally and morally and should be replaced by men who have not seen combat duty.

Others write that they have nothing to do and can see no reason why they are kept overseas unless it is a sinister plot to further socialized medicine. They call themselves political prisoners. They can see no reason why the young men who were given a medical education at the expense of the government could not be sent over to relieve them. They claim that doctors at home who have never left the States are being discharged with fewer points than many doctors who are overseas, and they can see no justice in that.

A group of representative medical officers send the following suggestions from France:

1. Let there be adequate medical personnel for American soldiers in each theatre. No more, no less.

2. Get the surplus of those overseas home immediately. There is an overwhelming surplus. Get those with long overseas service home now. They can't take much more.

3. Let the A.S.T.P. and V-12 doctors earn their government education by a tour of duty overseas, thereby allowing the poor, forgotten, disillusioned, lethargic doctor a chance to return home.

4. The American Medical Association should pursue its function of protecting the rights of its members. Let us not again see the JOURNAL repeat, without criticism, the exorbitant demands of the army. It nauseates us who know the true state of affairs, and is an insult to our intelligence.

5. We think too that after the cessation of hostilities there ought to be at least a degree of medical autonomy. A representative committee of the profession should have the power to decide how many doctors for the military and how many for the civilian population.

The future of individualistic American medicine is in the balance. You can tip the scales in the right direction. But it must be done now.

Infectious Hepatitis.

THE occurrence of upwards of 50,000 cases of homologous serum jaundice in our Armed Forces following yellow fever vaccine has directed attention to a curious and interesting malady that might truly be called an army disease. In civilian life we are accustomed to seeing occasional isolated cases of "catarrhal" jaundice about the pathology of which we knew little. The common belief was that it was due to a di-

gestive disturbance. Jaundice from all causes is recognized as occurring "normally" in armies at the rate of perhaps 0.10 cases per 1,000 men. After the administration of certain lots of yellow fever vaccine, notably No. 369 the case rate per 1,000 rose to 95.80. The vaccine used in 1941 and the first three and a half months of 1942 contained a small amount of presumedly normal human serum. Yellow fever vaccine containing human serum was discontinued April 15, 1942, when it became possible to produce a satisfactory product with an aqueous base.

This was not an entirely new problem. According to Findlay and Martin (*Lancet 1*:678, 1943), the British had studied it since 1934, and in 1937 were able to produce a yellow fever vaccine that was free from icterogenic properties. From November 1937 onwards no post-inoculation jaundice occurred in the many thousands of persons immunized in England and Africa. Similar precautions taken in Brazil also resulted in the elimination of jaundice as a sequel to yellow fever immunization.

In the words of Leland W. Parr (*M. Ann. District of Columbia 16*:443, 1945), "It is rare that herd outbreaks can be observed in man under such uniform conditions as existed in this instance in which constant and standard doses of an etiologic agent were placed in the tissues of large numbers of young adults, predominantly male, living under similar conditions and in like good health." At Camp Polk, for instance, 5,000 soldiers were inoculated with vaccine lot No. 369 on February 27, 1942, and remained at this camp for the next several months. Among them 1,004 cases of jaundice appeared. At Fort Custer on February 21st another group was immunized with lot No. 368. Some of these remained at Fort Custer and some were sent to Iceland. The incubation period as well as the severity of the disease varied tremendously in these cases. In the Camp Polk experience the earliest onset of symptoms was on the 15th day and the longest incubation period was 147 days. The mean incubation period was 96.41 with a standard deviation of 16.14 days. The Iceland group had a mean incubation period that was 9 days shorter than that of the group that remained at Fort Custer. The contribution of the host and his environment to the variability in case incidence, length of incubation period and variety and severity of symptoms has not been as yet sufficiently studied.

An apparently identical disease followed the administration of mumps convalescent plasma, (*Proc. Roy. Soc. Med. 37*:449, 1943-44). Certain batches of serum or plasma gave rise to as high as 50% incidence of jaundice that appeared about 3 months after the injection. In a discussion on infective hepatitis, homologous serum hepatitis and arsenotherapy jaundice before the Section of Experimental Medicine and Therapeutics of the Royal Society of Medicine, Marshall (*Proc. Roy. Soc. Med. 37*:449, 1944) reported on postarsphenamine jaundice. The late appearing type which occurred from the 12th to 17th week after beginning treatment was much less frequent in civil V. D. clinics than in the military clinics, although the routine was much the same. He thought that the infective factor was introduced by syringe, but that diet and the damaging effect of the arsenic on the liver may have been of some secondary importance. Loutit (*Proc. Roy. Soc. Med. 37*:460, 1944), in a series of cases of homologous serum jaundice which followed the administration of a particular batch of dried human serum, showed that a minute dose, no bigger than a trace of blood left in a syringe after arsphenamine administration, could cause the disease. Sheehan (*Lancet 2*:8, 1944) regards the findings in regard to syringe-transmitted infection, the hepatitis transmitted by the injection of yellow fever vaccine containing dried human plasma, and the hepatitis following measles or mumps convalescent serum and blood transfusions, to be the same. The common factor in all has been injection of presumedly

infected human blood or plasma with the development of hepatitis 2 to 4 months later. The donor blood appears to have been taken in the incubation stage, as there is no record that donors with jaundice were ever used. It is suggested that infective hepatitis in England and in the army in the Mediterranean theatre is also the same type of disease with a similar incubation period and that it could well be transmitted by biting insects.

In spite of almost ideal experimental-laboratory conditions very little has been learned about this disease. The cases that have come to autopsy, and there have been scores of them, have shown diffuse degeneration of the liver. Some have inflammatory infiltration of the intestinal mucosa. That the disease is caused by a virus is generally surmised. The cases that were produced artificially do not seem to be infectious as are the naturally occurring infectious hepatitis cases. However, Findlay and Martin (*Lancet 1*:678, 1943) have produced jaundice with an incubation period of 28, 30 and 50 days in human volunteers by instilling into their nares washings from the upper respiratory passages of patients in the preicteric and early icteric stages of post yellow fever vaccine jaundice. Gowen (Bull. U. S. Army Medical Department, January 1945, p. 41) who studied some 400 cases of epidemic hepatitis in Northern Tunisia in 1943 concluded that "the disease is caused by a viable agent which may be highly communicable but possesses only a mild degree of communicability,"—whatever that may mean.

Loutit and Maurisel (*Brit. M. J. 2*:757, December 1, 1945) call attention to the fact that homologous serum jaundice rarely follows individual transfusions (only two cases have been reported) but frequently follows the use of pooled blood, serum or plasma. It seems likely therefore that the icteric agent can be present only in very occasional bloods. Pooling of many plasmas or sera may therefore be ill-advised, as one icterogenic plasma might contaminate the whole pool. It has even been suggested that dilution of the agent might increase its virulence.

The practical lesson that civilian doctors should learn from this gigantic "experiment" is that one cannot be too careful in the sterilization of syringes and needles used not only in intravenous therapy, but also in obtaining samples of blood for diagnostic purposes.

Twenty-fifth Anniversary of the American Journal of Obstetrics and Gynecology.

WITH the December number the *American Journal of Obstetrics and Gynecology* celebrated its twenty-fifth anniversary. Dr. Robert L. Dickinson contributed a characteristically fine title page. In the decorative border he has incorporated a musician as an appeal to Apollo, an albatross for luck while Dr. Dickinson, himself, equipped with wings, holds up one side of the shield of obstetrics and gynecology. The journal began publication in October 1920 as the successor of the *American Journal of Obstetrics and Diseases of Women and Children* which had been founded in 1868. In the 77 years covered by these two journals, obstetrics and gynecology have become recognized specialties. Obstetrics, especially in English speaking countries, grew out of a medical background, and gynecology out of a surgical background. Both have been tremendously changed by new knowledge derived from physiology and endocrinology. Both developed into independent specialties, and now we see them being fused into a single discipline. On the other hand since the public has learned that obstetrics is indispensable, there is a movement on foot for the government to take it over and to dispense it politically, and thus disrupt the union that promises so much.

The tremendous advances in knowledge that have occurred in the past 25 years and the more recent changes in social aspects, have been reflected in the pages of the *American Journal of Obstetrics and Gynecology*. Not only do we know more about the development of the embryo, the physiology of reproduction and the role played by the endocrines, but we have become more interested in gynecological pathology with its endocrine implications. The widespread use of blood and plasma has altered the outlook in surgical and obstetric operations. Sulfanilamides and penicillin have simplified the treatment of infections. Simultaneously, the profession has undertaken a rigid self-analysis of methods and techniques which has resulted in a tremendous lowering of maternal and fetal mortality. Dr. George W. Kosmak who has edited the Journal since its beginning may well be proud of the part the Journal has played and also of the part he personally has played in these developments.

Societies

The Albemarle County Medical Society,

At its annual meeting on January the 3rd, elected Dr. Edwin P. Lehman of the University of Virginia as president for the coming year, and Dr. E. D. Davis of Crozet as vice-president. Dr. W. Roy Mason of the University was re-elected secretary-treasurer.

Alexandria Medical Society.

At the regular monthly meeting of this Society, held on January 10th, Dr. Noel Stow of Washington spoke on "The Effects of Thiouracil on Exophthalmus". Dr. L. Floyd Hobbs is president of this Society and Dr. James A. Gooch, secretary.

Patrick-Henry Medical Society.

The regular quarterly meeting of the Patrick Henry Medical Society was held at Broad Street Hotel in Martinsville, on Friday evening, January 11, 1946. After an enjoyable dinner the meeting was called to order by Dr. E. N. Shockley who presented the new President, Dr. T. H. Dickerson. The business of the evening consisted of the appointment of standing committees, the endorsement by the society of the Charity League Diphtheria Immunization program, and the endorsement by the society for the Nursing Committee of the Henry County Chapter of the American Red Cross to advocate the establishment of a Local Health Service for Martinsville and Henry County. Several applications for membership were turned over to the membership committee.

Following the business meeting, Dr. A. M. Grose-close of Roanoke, gave an interesting and instructive paper on Caeserean Section.

Dr. W. N. Thompson of Stuart is secretary-treasurer of the Society.

Norfolk County Medical Society.

At the meeting on January 14th, the guest speaker was Dr. Frank R. Lock, Professor of Obstetrics and Gynecology, Bowman Gray School of Medicine, Wake Forest, North Carolina. His subject was Postpartum Sterilization.

Roanoke Academy of Medicine.

At the regular meeting of the Academy on January 7th, guest speakers were Drs. Charles A. Poindexter and A. Wilbur Duryee, associate clinical professors of medicine at the New York Post-Graduate Medical School, Columbia University. Dr. Poindexter spoke on Recent Advances in the Treatment of Heart Disease, and Dr. Duryee on The Management of Venous Thromboses and Pulmonary Emboli.

Dr. T. J. Hughes is president of the Academy and Dr. George Bourne, secretary.

Virginia Peninsula Academy of Medicine.

The scheduled speaker for the January 21st meeting of the Academy, Dr. Helen Taussig, of Johns Hopkins Hospital, was unable to attend because her plane was grounded by bad weather. To fill in, Dr. William A. Read of Newport News spoke on the use of the Miller Abbott tube. There was an attendance of eighty at this meeting. Dr. Harvey G. Bland and Dr. C. D. Bradley, both of Newport News, are president and secretary, respectively.

News

The Tri-State Medical Association of the Carolinas and Virginia

Is to hold its 47th annual meeting in Richmond, February the 25th and 26th, under the presidency of Dr. G. H. Bunch of Columbia, S. C. Below is a list of those on the preliminary program, with their subjects:

Dr. Thos. Brockman, Greenville, S. C.—Why All States Should Have a Basic Science Law.

Dr. Clay W. Evatt, Charleston, S. C.—Refraction Changes in Health and Sickness.

Dr. J. M. Feder, Anderson, S. C.—Adequate Laboratory Service for the Rural Hospital.

Dr. Katharine B. MacInnes, Columbia, S. C.—The Use of Vitamin K in Urticaria.

Dr. F. E. Kredel, Charleston, S. C.—Surgical Relief of Post-Traumatic Pain, Including Painful Scars.

Dr. George R. Wilkinson, Greenville, S. C.—Rheumatic Fever.

Dr. Charles N. Wyatt, Greenville, S. C.—Medical Conditions as Found in the Middle East.

Dr. David Cayer, Winston-Salem, N. C.—The Laboratory Diagnosis of Deficiency Diseases.

Dr. Clyde Gilmore, Greensboro, N. C.—Functional Cardiovascular Disturbances.

Dr. Walter Kempner, Durham, N. C.—Some Effects of the Rice Diet Treatment of Hypertension.

Dr. Sylvan A. Steiner, Washington, D. C.—Studies on Essential Hypertension.

Dr. Jas. W. Watts and Dr. Walter Freeman, Washington, D. C.—Psychosurgery—Factors Influencing the Prognosis.

Dr. Chas. Stanley White, Washington, D. C.—Intravenous Protein Solutions in Surgical Practice.

Dr. Russell Buxton, Newport News—The Use of Penicillin in the Treatment of Tetanus.

Dr. Guy W. Horsley, Richmond—Results of Treating Cancer of the Breast With Radical Amputation and Bilateral Oophorectomy.

Dr. Linwood D. Keyser, Roanoke—Present Day Treatment of Urinary Stone.

Dr. R. L. Raiford, Franklin—Intravenous Anesthesia.

Dr. Chas. R. Robins, Richmond—(subject not given).

Guest Speaker:

Dr. Matthew T. Moore, Philadelphia, Penn.—Some Usual and Unusual Mechanisms of Abdominal Pain.

President's Address:

Dr. George H. Bunch, Columbia, S. C.

Further information may be obtained from Dr. James M. Northington, secretary-treasurer, Charlotte, N. C.

Back In Civilian Practice.

The following doctors, in addition to those previously announced in the MONTHLY, have advised us of their release from service and reopening of their offices:

Dr. Nathaniel J. Chew has returned to Bristol and opened offices for the practice of internal medicine. He was recently associated with Lt. Col. C. M. Caravati at Woodrow Wilson Hospital, Staunton.

Dr. Grant R. Elliott is back in Orange and engaged in general practice.

Dr. A. Stephens Graham, Richmond, has reopened his office at Stuart Circle Hospital for the practice of general surgery.

Dr. Edward E. Haddock, Richmond, will be engaged in general practice, with offices at 2019 Monument Avenue.

Dr. D. O. Helms, formerly of Pocahontas, has located for general practice at Hellertown, Pa.

Dr. John O. Hurt, who entered the service from Roanoke and was engaged in neuropsychiatric work in the Pacific area, has returned and located at Vinton.

Dr. J. L. Mann, Hampton, has gone to the Northwest Clinic, Minot, North Dakota, where he will work in the department of internal medicine for sometime.

Dr. Walter L. Nalls, formerly of Richmond, has opened offices in Alexandria, where he will be engaged in the practice of internal medicine.

Dr. James Parrish, Portsmouth, has reopened his office at 600 Court Street, where he is limiting his practice to surgery, gynecology and obstetrics.

Dr. Allen Pepple has returned to Richmond and is again associated with Dr. Richard W. Fowlkes in the practice of dermatology, with offices in Professional Building.

Dr. E. W. Perkins has returned to Richmond and reopened his office for the practice of ophthalmology.

Dr. James S. Richardson is now engaged in general practice at Grundy.

Dr. Chester L. Riley resumed his practice in obstetrics and gynecology in Winchester the first of February.

Dr. Joshua P. Sutherland, class of March '43, University of Virginia, has located at Harman where he is in industrial practice.

Dr. W. Taliaferro Thompson, Jr., has opened offices for the practice of internal medicine in Medical Arts Building, Richmond.

Dr. George D. Vermilya has returned to Richlands and resumed his practice of surgery at the Clinch Valley Clinic.

Other members recently returned from service are:

Dr. Walter P. Adams, Norfolk.
Dr. Charles V. Amole, Alexandria.
Dr. Emerson M. Babb, Ivor.
Dr. J. Lawson Cabaniss, Roanoke.
Dr. W. H. Chapman, Jr., Suffolk.
Dr. Franklin H. Cohen, Norfolk.
Dr. John Crawford, Norfolk.
Dr. Grant R. Elliott, Orange.
Dr. F. O. Fay, Norfolk.
Dr. Frank Helvestine, Jr., Roanoke.
Dr. Chester F. Hogan, Richlands.
Dr. J. R. B. Hutchinson, Arlington.
Dr. John Paul Jones, Richmond.
Dr. Ben M. Kagan, Richmond.
Dr. C. E. Keefer, Lynchburg.
Dr. R. G. McAllister, Richmond.
Dr. Walter McMann, Danville.
Dr. Lawrence J. Motyca, Norfolk.
Dr. Sidney G. Page, Jr., Richmond.
Dr. Wilmer H. Paine, Charlottesville.
Dr. Benjamin F. Phillips, Quantico.
Dr. Prosser H. Picot, Alexandria.
Dr. W. E. Roye, Richmond.
Dr. Robert R. Rudolph, Roanoke.
Dr. George W. Simpson, Norfolk.
Dr. Frank P. Smart, Norfolk.
Dr. Norman Sollod, Petersburg.
Dr. Luther C. Spengler, Jr., Roanoke.
Dr. Joseph Staley, Marion.
Dr. J. Powell Williams, Richmond.
Dr. L. K. Woodward, Front Royal.
Dr. Frank A. Zack, Newport News.

Commissioner of Mental Hygiene.

Upon recommendation of the State Hospital Board, Governor Tuck has appointed Dr. Joseph E. Barrett as State Commissioner of Mental Health, to fill the vacancy caused by the death of Dr. Hugh C. Henry. Dr. Barrett was formerly director of the Michigan State Hospital Commission and, when he first came to Virginia, was connected with the Southwestern State Hospital at Marion. Since the fall of 1943, however, he has been administrative head of the Eastern State Hospital at Williamsburg.

Dr. Riggin Honored.

Dr. Irl C. Riggin, State Health Commissioner, was the recipient of one of the 1946 Albert and Mary Lasker Foundation awards of $500.00 presented by the Planned Parenthood Federation of America at its 25th Anniversary Dinner in New York on January 23rd. This award was given for meritorious public health service. Dr. Riggin has led Virginia in becoming the seventh state in the union to make planned parenthood services available as part of the state's public health program of maternal care.

The other award was presented to Dr. Robert Latou Dickinson, New York City, for the most significant contribution to research in human fertility.

News from University of Virginia, Department of Medicine.

The School of Medicine, University of Virginia, gave a two weeks Refresher Course in general medicine for medical officers recently separated from military service from December 3rd through December 15th. Thirty-three veterans were enrolled in the course. Among the non-faculty group who participated in this course were Major John H. Dingle, Director of Army Commission on Respiratory Infections, Fort Bragg, N. C.; Dr. Harrison F. Flippin, Associate Professor in Medicine, University of Pennsylvania; Lt. Col. Perrin Long, Professor of Medicine in Johns Hopkins Medical School; Dr. Everett I. Evans, Associate Professor of Surgery in the Medical College of Virginia.

Dr. Ying-Tang Hsu, formerly professor of pathology at Yale-in-China, at Changsha, has arrived at the University of Virginia to fill a position as visiting professor of pathology and resident pathologist for the University of Virginia Hospital.

Dr. H. Rowland Pearsoll, a research fellow in internal medicine, read a paper, "Reactions to Antipneumococcal Rabbit Serum, III. Effects of varying Amounts of Pneumococcal Polysaccharide on Reversed Passive Anaphylaxis in Guinea Pigs, IV. A Simple Roughly Quantitative Method of Measuring Circulating Polysaccharide", at the meeting of the American Academy of Allergy in Chicago, on December 10 and 11, 1945. Dr. Staunton L. Eversole and Dr. Oscar Swineford, Jr., were co-authors.

Dr. Oscar Swineford, professor of the practice of medicine, presided at the meeting of the American

Academy of Allergy in Chicago, December 10 and 11, 1945. The subject of the Presidential Address was "Report of a Survey of Undergraduate Education in Allergy in the United States".

Dr. Samuel A. Vest, professor of urology, was elected chairman of the Section on Scientific Exhibits for the forth-coming meeting of the American Urological Association to be held in Cincinnati in June, 1946.

Personnel Changes, State Department of Health.

Dr. William Grossman, Director of the Bureau of Communicable Disease Control, returned to the Department from the Armed Services as of January 1st.

Dr. Donald K. Freedman, Surgeon (R) USPHS., who was on loan to the Department, and who has been acting as Health Officer of the Peninsula Health District, has been withdrawn by the USPHS effective December 8, 1945.

The McGuire Clinic,

Richmond, announces the enlargement of its staff by the addition of Dr. George A. Welchons in the department of bronchoscopy, Dr. George S. Bowers in general medicine, Dr. John R. Massie in general surgery, and the return of Dr. Charles M. Nelson in urology.

Of special interest to the friends of Dr. McGuire is the dedication, recently noted, of John A. Hardy's "Synopsis of the Diagnosis of the Surgical Diseases of the Abdomen", second edition, published in 1945, which reads as follows:

"To Stuart McGuire of Virginia who embodies the genius and excellence of a lineage of great surgeons, this book is admiringly dedicated."

Dr. C. Sherrill Armantrout,

Who completed his residency in surgery at the Medical College of Virginia Hospitals, Richmond, July 1, has opened an office in Harrisonburg, and will limit his practice to general surgery.

Dr. Bruno Barelare, Jr.

Resigned his position as assistant professor of urology at the University of Virginia as of January 1, and is now associated in urology with Dr. Walter F. Scott in Birmingham, Alabama. Since locating there, he has been appointed associate professor of urology at the University of Alabama Medical College.

Dr. Edwin D. Vaughan,

Of Ashland, is now in New York City, where he is taking a 2-year residency at the New York Eye and Ear Infirmary.

Dr. W. E. Overcash,

Formerly of Roanoke, has moved to Danville where he has offices in the new x-ray department of the Memorial Hospital. New equipment has been installed in this department, including both superficial and deep x-ray therapy.

National Gastroenterological Association Award Contest.

The National Gastroenterological Association announces the establishment of an Annual Cash Prize Award of $100 and a Certificate of Merit for the best unpublished contribution on Gastroenterology or allied subjects. Certificates will also be awarded those physicians whose contributions are deemed worthy.

Contestants residing in the United States must be members of the American Medical Association. Those residing in foreign countries must be members of a similar organization in their own country. The winning contribution will be selected by a board of impartial judges and the award is to be made at the Annual Convention Banquet of the National Gastroenterological Association to be held at the Hotel Pennsylvania in New York City on Thursday evening, June 20, 1946.

All entries for the 1946 prize should be limited to 5,000 words, be typewritten in English, prepared in manuscript form, submitted in five copies, accompanied by an entry letter, and must be received not later than May 1, 1946. Entries should be addressed to the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

The A. P. A. A. (Ninth) 1947 Exhibition,

To be held at Atlantic City, on the occasion of the Centennial Session of the American Medical Association, will also be the occasion of the judging of the "Courage and Devotion Beyond the Call of Duty" Art Prize Contest ($34,000 in Savings Bonds).

This contest was originally scheduled for the 1946 A.M.A. Session but has been postponed one year, upon the best advice, in order to give more physician an additional year to complete their art pieces on this special prize subject.

For further information regarding both the San Francisco 1946 and the Atlantic City 1947 Art Exhibits, physicians may write either the American Physicians Art Association Secretary-Treasurer, Dr. Francis H. Redewill, Flood Building, San Francisco, Cal., or the sponsor, Mead Johnson & Co., Evansville 21, Ind.

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons Foundation

Announces that the annual prize contest will be conducted again this year. For information, address Dr. James R. Bloss, secretary, 418 Eleventh Street, Huntington 1, W. Va.

Dr. Thomas L. Gemmill

Has resigned his position on the staff of St. Albans Sanatorium and returned to private practice in Radford.

Dr. Wiley D. Lewis,

Of Johnson City, Tennessee, has rejoined the staff of St. Albans Sanatorium, at Radford. He was on the staff of this hospital for about a year prior to entering the army in 1942, having first gone there from Adams House in Boston, where he had served as a physician for a year. He is a graduate of the University of Tennessee in 1931.

Urology Award.

The American Urological Association offers an annual award "not to exceed $500" for an essay (or essays) on the result of some specific clinical or laboratory research in Urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years. All interested should write the Secretary, for full particulars.

The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Netherland Plaza, Cincinnati, Ohio, July 22-25, 1946.

Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before July 1, 1946.

Dr. Lintner Clark,

For the past three years located in Roanoke, has moved to Raleigh, N. C., where he will continue the practice of roentgenology.

Dr. W. W. Wilkinson,

LaCrosse, has been elected president of the Bank of LaCrosse.

Married.

Dr. Paul Ward Robinett, Huntington, W. Va., and Miss Shirley Harwood Kersey, Richmond, December 31st. He is a graduate of the Medical College of Virginia, class of 1945, and is serving an internship at the Peter Bent Brigham Hospital, Boston.

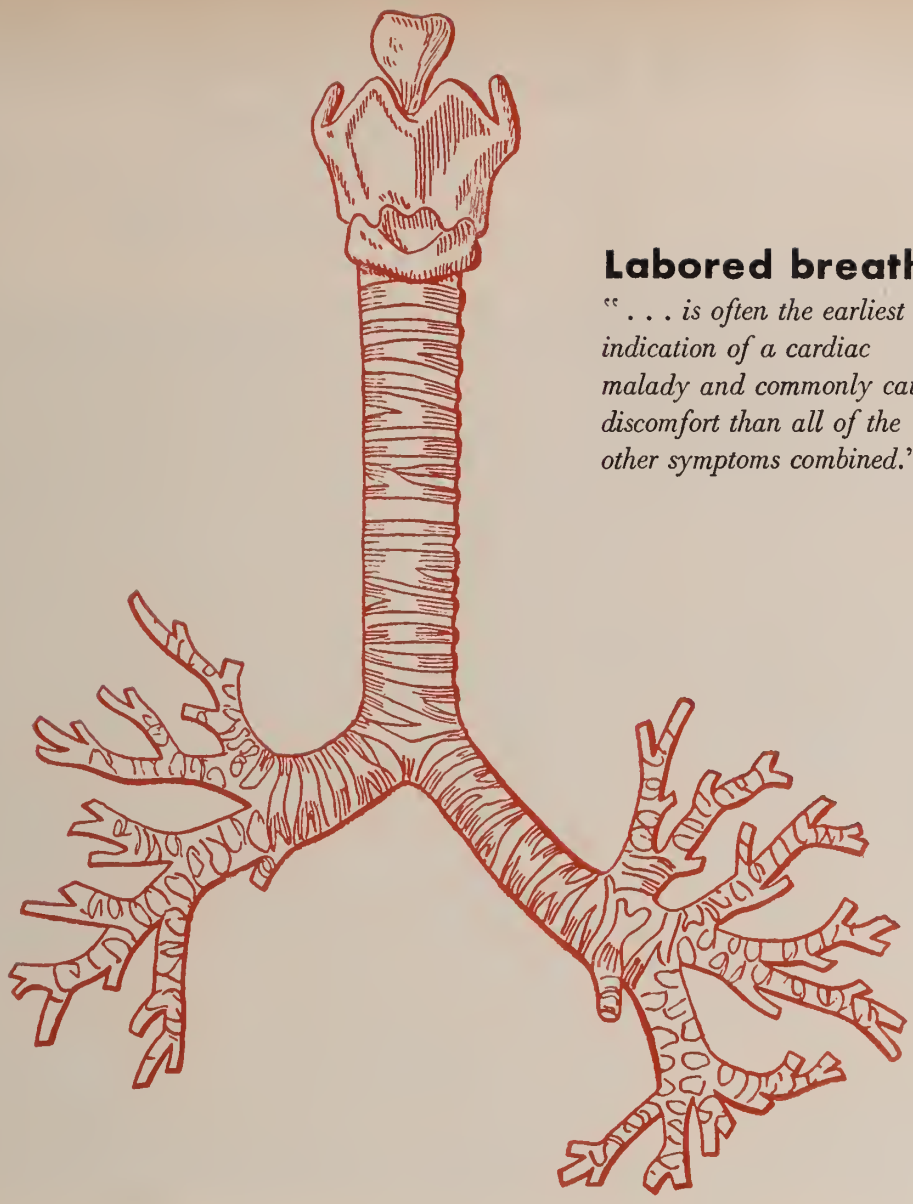
Dr. William H. Matthews,

Richmond, has been appointed assistant to the chief medical officer of the Veterans' Administration subregional office in Richmond. He was recently discharged from the Medical Corps of the Army, after serving with the First Army in France, Belgium and Germany. Dr. Matthews is a graduate of the Medical College of Virginia, class of 1935, and was located in Atlanta, Georgia, before entering the Service.

The U. S. Public Health Service

Announces that appointments to fill vacancies in the Reserve Corps of the Service are now being made, and examinations for Regular Corps appointments will be held in April and May. Physicians, dentists, and nurses are needed immediately for duty in hospitals, in the Tuberculosis and Venereal Disease Control programs, and in other activities of the Public Health Service. Pay and allowances, established by law, are identical with those for medical officers of the Army. All travel expenses, including travel to first station, are paid by the Service.

Appointments to the Reserve Corps are made on a basis of review of data furnished by the applicant. Physical examination is required. Regular Corps



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ACCEPTED AMERICAN MEDICAL ASSN Council on Pharmacy and Chemistry

1. Harrison, T. R.: Cardiac Dyspnea, Western J. Surg., 52:407 (Oct.) 1944.

SEARLE *Research in the Service of Medicine*

appointments require appearance before a Board, and a written professional examination. Dates and places for the examination will be announced shortly. A person receiving an appointment in the Reserve Corps immediately, may, if he desires, take the examination for the Regular Corps at the time they are held.

Those interested in either immediate appointment in the Reserve Corps, or in taking the examination for the Regular Corps, should request application forms of the Surgeon General, U. S. Public Health Service, Washington, D. C., Federal Security Agency.

New Books.

The following books recently added to the Library of the Medical College of Virginia are available to our readers under usual library rules:

Allison—Sea diseases. 1943.
Ballenger—A manual of otology, rhinology and laryngology. 2nd ed.
Barclay—The foetal circulation and cardiovascular system.
Beardwood—Simplified diabetic management. 4th ed. 1944.
Bly—A guide to cathode ray patterns.
Brock—The basis of clinical neurology. 2nd ed.
Brody—Bioenergetics and growth. 1945.
Burch and Winsor—A primer of electrocardiography.
Burnet—Virus as organism.
Cantarow—Clinical biochemistry. 3rd ed. 1945.
Clement—Nitrous oxide-oxygen anesthesia.
Cobb—Borderlands of psychiatry.
Cohn—Proteins, amino-acids and peptides as ions and dipolar ions.
Colcord—Your community.
Comroe—Arthritis and allied conditions. 3rd ed. 1944.
Day, Sister Mary A. C.—Principles and techniques of nursing procedures as developed in St. Mary's.
Flagg—The art of resuscitation.
Frobisher—Fundamentals of bacteriology.
Geckeler—Plaster of Paris technic.
Heath—What people are.
Höber—Physical chemistry of cells and tissues.
Hoffman—Female endocrinology.
Horney—Our inner conflicts.
Hurry—Imhotep.
Ivy and Curtis—Fractures of the jaws.
Karrer—Organic chemistry.
Kracke & Garver—Diseases of the blood and atlas of hematology.
Kuntz—The autonomic nervous system.
Kuntz—A text-book of neuro-anatomy.
Landsteiner—Specificity of serological reactions. 2nd ed. 1945.
Lawrence—The diabetic life. 13th ed.
Macleod—Notes on the surgery of the War in the Crimea, with remarks on the Treatment of gunshot wounds. 1862.
Meerloo—Total war and the human mind.
Milbank Memorial Fund—New steps in public health. 1945.
Olkon—Essentials of neuro-psychiatry.
Raper—Man against pain; epic of anesthesia.
Reynolds & Manning—Excursion in science.
Rosenow—Poliomyelitis. (The International Bull.)
Savill—The hair and scalp. 3rd. 1945.
Steinberg—Infections of the peritoneum. 1944.
Sutton—A history of the disease usually called typhoid fever. 1850.
Taylor—Cinchona in Java.
Temkin—The falling sickness, a history of epilepsy from the Greeks to the beginnings of modern neurology.
Thorpe—Personality and life.
Wartenburg—Examination of reflexes. 1945.
Weddell—St. Paul's Church. 2 vols.
Wolff—A pathology of the eye. 2nd ed.

Dr. Benjamin M. Kagan,

Richmond, before leaving the service, received a commendation from the commanding officer of his headquarters for superior performance of duty as epidemiologist, chief of the Theater Laboratory service and commanding officer of the 200th Station Hospital.

Wanted:

Physician to practice in Stafford County, Virginia. Population 10,000. Only one physician in county. Will offer financial aid to establish. Write to E. L. C. Derrick, Secretary, Public Health Association, Stafford, Virginia. *(Adv.)*

Wanted:

Laboratory Technician for small hospital. For particulars, write care of P. O. Box 146, Suffolk, Va. *(Adv.)*

Position Wanted.

Physician desires assistantship to doctor who needs help. Consider locum tenens. Ambitious, aged 38, married. Address "Physician", care this journal, 1200 East Clay Street, Richmond 19. *(Adv.)*

Established Hospital for Lease—

A sanitorium for nervous, mental, alcoholic and drug cases, doing an excellent business, to a reputable physician or medical group. Dr. E. W. Stokes, 923 Cherokee Road, Louisville 4, Kentucky. *(Adv.)*

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Obituaries

Dr. Claiborne Willcox,

Prominent Norfolk pediatrician, died December 30th following a heart attack. He was fifty-five years of age and a graduate in medicine from the University of Virginia in 1915. Dr. Willcox served abroad as a medical officer in the Army during World War I. He had practiced in Norfolk for twenty-six years. He was a past president of the Norfolk County Medical Society and had been a member of the Medical Society of Virginia for twenty-eight years. His wife and three children survive him.

Dr. Rosser Noland Hillsman, Jr.

Who was located at Amherst before entering the service in 1942, died August 31 of nephritis. He was thirty-seven years of age and a graduate in medicine from the University of Virginia in 1933.

Dr. Houston Robinson Farley.

This office has just been advised of the death of Dr. Farley which occurred at his home in Pulaski, June 20, 1944, at the age of sixty-five. Dr. Farley graduated in medicine from the former University College of Medicine, Richmond, in 1904. He was a member of the Southwestern Virginia Medical Society and had been a member of the Medical Society of Virginia for twenty years.

Dr. Waller Smith Leathers,

Dean Emeritus of Vanderbilt University School of Medicine, and nationally known in the field of public health, died at his home in Nashville, on January 26. Dr. Leathers was born near Charlottesville, Va., in December 1874, and was graduated in medicine from the University of Virginia in 1895. Before going to Nashville in 1924, he was connected with the University of Mississippi, being one of the organizers of its school of medicine. Dr. Leathers held many positions of honor, and was a former president of the National Board of Medical Examiners, the American Public Health Association, and the Association of American Medical Colleges. His wife and a daughter survive him.

Dr. Everett A. Land.

At a meeting of the Staff of the Norfolk General Hospital, December 4, 1945, the following resolutions were unanimously adopted:

WHEREAS, in the death of Dr. Everett A. Land, of Norfolk, Virginia, who passed away October 30, 1945, this body has lost one of its most loved and valuable friends and advisors.

Dr. Land was born in Princess Anne County, Virginia. He attended Old Norfolk Academy, graduated from the University College of Medicine at Richmond, Virginia, in 1906 and took a year internship at Sarah Leigh Hospital in Norfolk. He then attended Brooklyn Eye, Ear, Nose and Throat Hospital in the speciality in which he later followed.

He began to practice medicine in the City of Norfolk in 1909 where he limited his work to eye, ear, nose and throat. He served on the Clinical Staff of Norfolk General Hospital from the time it was organized until the time of his death. Being an intensely active worker, his practice included all creeds and colors, rich and poor, who loyally followed him, and who will have no replacement for his genial personality and the influence of his friendship. Having been intimately connected with the Norfolk General Hospital and its predecessors for nearly forty years, his ability, judgment and friendship will be greatly missed.

BE IT RESOLVED that the Staff of the Norfolk General Hospital express to his widow and family their deep sympathy in their great loss.

BE IT FURTHER RESOLVED that a copy of these resolutions be spread on the minutes of this body and a copy be sent to his family and the VIRGINIA MEDICAL MONTHLY.

C. L. HARRELL, M.D., *Chairman*
WALTER P. ADAMS, M.D.
B. R. KENNON, M.D.

Dr. Robert DuVal Jones.

It is with profound sorrow and the knowledge of a great loss that the Staff of the Norfolk General Hospital records the untimely passing of Robert DuVal Jones, one of its most distinguished and beloved members, September 4, 1945.

Dr. Jones began work in the Norfolk General Hospital January, 1930, and was faithful in his obligations throughout the years of his active work in the institution. In the sixteen years of his residence here he established himself as a surgeon of superb training, of sound judgment and of fine skill. To these he added an interest in his work which kept him alert to new ideas and techniques and a devotion which led to an intense concentration on the problems before him.

BE IT RESOLVED that the Staff of the Norfolk General Hospital expresses feeling of keen regret over the death of a distinguished surgeon when he was in the full stride of his career and that a copy of these resolutions be sent to the members of his family, spread on the minutes of the staff, and a copy to the Medical Society of Virginia.

R. L. PAYNE, M.D.
R. B. GRINNAN, M.D.
R. B. NICHOLLS, M.D., *Chairman*

Blindness Due to Cataracts.

One third of the people over 60 years of age are totally blind because of cataractous eyes, a clouding of the lens, according to Truman L. Boyes, M.D., of New York.

Writing in the January issue of *Hygeia,* health magazine of the American Medical Association, Dr. Boyes says:

"Normally from five to ten years are required before complete maturity of a cataract is reached. Definite knowledge of why cataract forms in one person's eye and not in another's has not yet been determined, although we know that certain diseases, notably diabetes, cause disturbed nutrition within the entire body and may promote the formation of cataracts within a few months.

"Cataracts may occur at any age. The most common kinds are congenital (at birth) cataracts in young children, cataracts due to injury to the lens, and the so-called senile cataracts found in the middle aged and elderly people. Congenital and senile cataracts are occasionally spoken of as primary cataracts, because they usually occur without other diseases of the eye. Their precise cause is not well understood. Many cataracts are called secondary because they start during, or after, some inflammation in the eye, or a disease of the general system."

The question of cause, prevention and cure is very important because the longer people live the more apt they are to have cataracts. The author explained that "while certain drugs, especially some so-called weight-reducing medicines, or fat oxidizers, have been found to produce cataracts, none has been discovered which will prevent or always retard their progression."

The cure for cataracts by surgery has progressed to the point where "nearly all eyes with poor vision as the result of cataract alone can be helped," the author said. "Many of these eyes may gain normal vision, and most, if not all, may gain useful vision by the removal of the opaque, clouded lens. The method of removal has been so greatly improved that it results satisfactorily in nearly every case. . . . After the cataractous lens is removed, the eye cannot see well unless a spectacle lens of sufficient strength is used to replace that which was formerly supplied by the natural crystalline lens. A glass lens is now placed outside the eye and worn just as an ordinary pair of glasses."

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BOOK ANNOUNCEMENTS.

Books received for review are promptly acknowledged in this column. In most cases reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Men Without Guns. Text by DEWITT MACKENZIE, War Analyst of the Associated Press. Descriptive Captions by MAJOR CLARENCE WORDEN, Medical Department of the United States Army. Foreword by Major General Norman T. Kirk, Surgeon General of the United States Army. Philadelphia. The Blakiston Company. 1945. xi-47 pages. Illustrated with 137 Plates from the Abbott Collection of Paintings owned by the United States Government. Price $5.00.

A Future for Preventive Medicine. By EDWARD J. STIEGLITZ, M.S., M. D., F.A.C.P. New York, The Commonwealth Fund. 1945. xvi-77 pages. Price $1.00.

Trends of Mental Disease. American Psychological Association. King's Crown Press, New York. 1945. 120 pages. Price $2.00.

What People Are. A Study of Normal Young Men. By CLARK W. HEATH. In Collaboration with Lucien Brouha, Lewise W. Gregory, Carl C. Seltzer, Frederic L. Wells, and William L. Woods. The Grant Study. Department of Hygiene, Harvard University. Harvard University Press, Cambridge, Mass. 1945. ix-141 pages. Price $2.00.

The Osseous System. A Handbook of Roentgen Diagnosis. By VINCENT W. ARCHER, M.D., Professor of Roentgenology, University of Virginia, Department of Medicine. The Year Book Publishers, Inc., Chicago. 1945. 320 pages. Illustrated. Price $5.50.

Government in Public Health. By HARRY S. MUSTARD, B.S., M.D., LL.D., DeLamar Professor of Public Health Practice and Director, School of Public Health, Faculty of Medicine, Columbia University. New York. The Commonwealth Fund. 1945. xvi-219 pages. Price $1.50.

Suggested School Health Policies. A Charter for School Health. Second Edition. Revised by the National Committee on School Health Policies of the National Conference for Cooperation in Health Education. 1945. Health Education Council. New York and Minneapolis. Pamphlet of 46 pages. Price 25 cents.

Suggested School Health Policies—A charter for school health, now in the second edition, is an authoritative manual with the backing of fifteen national organizations. The purpose of this little document is to provide a clear comprehensive, printed statement of the consensus of well-informed professional opinion concerning many specific school policies which directly or indirectly affect the health of children and adults. It discusses general health policies, provisions for healthful school living, health and safety instruction, services for health protection and improvement, health aspects of physical education, education and care of the handicapped, and qualifications of school health personnel. The discussion of the question should the schools stay open during epidemics is an example of the "clear headedness" of the book. Contrary to beliefs expressed in popular hysteria, epidemics occurring in communities having well-organized, efficient public health facilities usually can best be controlled if schools remain open. The decision regarding the closing of schools when epidemics threaten, may be decided locally by answering the following two questions:

1. Are nurses and medical staffs so adequate and the teaching staff so alert that the inspection, observation, and supervision of students will keep sick students out of school?

2. If schools are closed, will students be kept at home and away from other students, so that the closing of schools will not increase opportunities for contact with possible sources of infection?

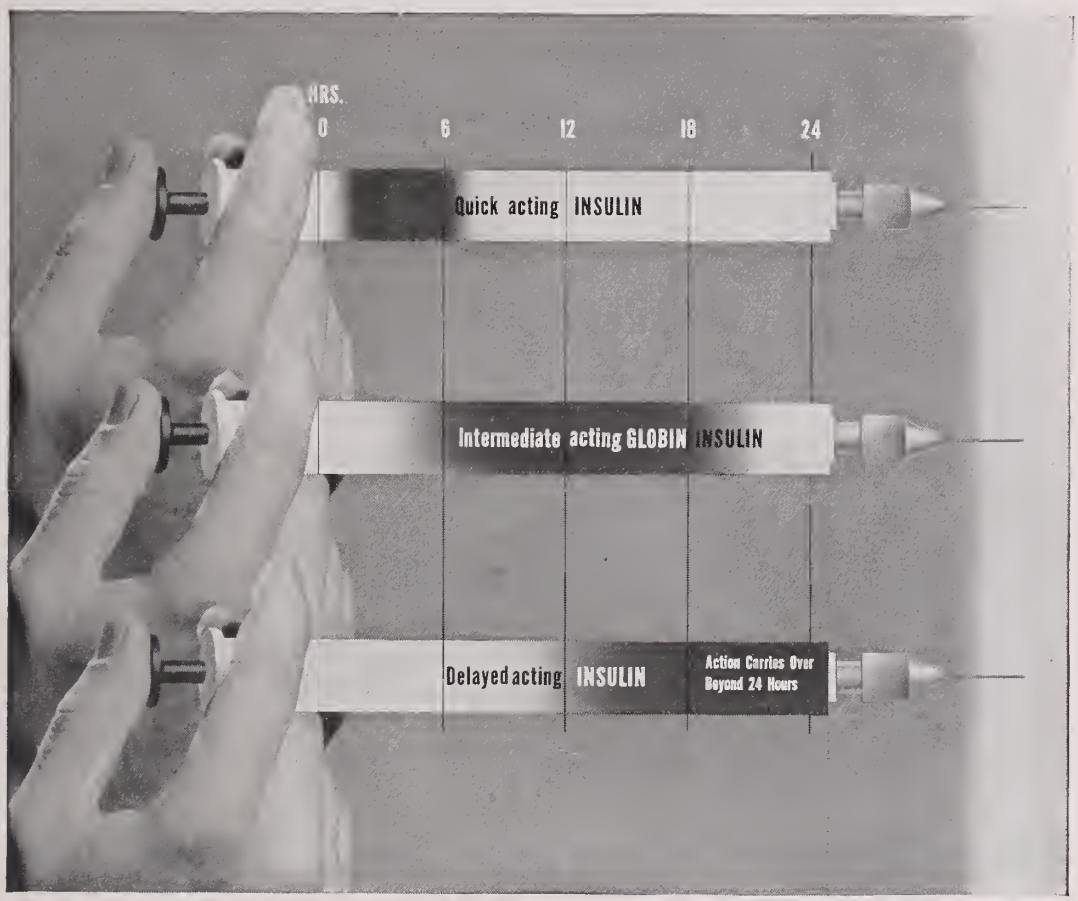
M. P. R.

New Books.

The following are recent acquisitions to the Library of the Medical College of Virginia, and are available to our readers under usual library rules:

Adriani—Chemistry of anesthesia.
Alpers—Clinical neurology.
Association for Research in N. & M. Dis.—Trauma of the central nervous system.
Best & Taylor—The physiological basis of medical practice. 4th ed.
Cabot & Adams—Physical diagnosis.
Campbell—Everyday psychiatry.
Commonwealth Fund—Health units for the nation.
Cooperstown Conference—Rural medicine.
Davis—It's all in your mind.
Emerson—Local health units for the nation.
Foot—Pathology in surgery.
Hardy—Synopsis of the diagnosis of the surgical diseases of the abdomen.
Homans—A textbook of surgery. 6th end.
Mackenzie—Men without guns.
Mustard—Government in public health.
Obrig—Contact lenses.
Obrig—Modern ophthalmic lenses and optical glass.
Sheehan—General and plastic surgery.
Shillaber—Photomicrography in theory and practice.
Stander—Textbook of obstetrics.
Stielglitz—A future for preventive medicine.

Your 3 choices when treating diabetics...



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FOR many centuries,—and apparently down to the present time, even in this country—ricketic children have been passed through a cleft ash tree to cure them of their rickets, and thenceforth a sympathetic relationship was supposed to exist between them and the tree.

Frazer * states that the ordinary mode of effecting the cure is to split a young ash sapling longitudinally for a few feet and pass the child, naked, either three times or three times three through the fissure at sunrise. In the West of England, it is said the passage must be "against the sun." As soon as the ceremony is performed, the tree is bound tightly up and the fissure plastered over with mud or clay. The belief is that just as the cleft in the tree will be healed, so the child's body will be healed, but that if the rift in the tree remains open, the deformity in the child will remain, too, and if the tree were to die, the death of the child would surely follow.

*Frazer, J. G.: The Golden Bough, vol. 1, New York, Macmillan & Co., 1923

It is ironical that the practice of attempting to cure rickets by holding the child in the cleft of an ash tree was associated with the rising of the sun, the light of which we now know is in itself one of Nature's specifics.

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Annual Meeting
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PRINCIPLES UNDERLYING THE EARLY DIAGNOSIS OF NUTRITIONAL DEFICIENCY DISEASE*

JOHN B. YOUMANS, COLONEL, MEDICAL CORPS,
Director, Nutrition Division, Preventive Medicine Service,
Office of the Surgeon General,
Washington, D. C.

My subject this evening lies in the field of nutrition. You are well aware, I am sure, of the great upsurge of interest in nutrition during the last ten or fifteen years. This has not been confined to the medical profession nor to those interested professionally in nutrition. It has involved the general public as witnessed by the tremendous advertising and sale of vitamin preparations. Despite this froth of excessive and uncritical enthusiasm, however, there is a great deal of solid advance in our knowledge of nutrition which is even now only beginning to be fully appreciated and applied. One has only to consider the recently disclosed relation of nutrition to immunity and to recovery from trauma and infectious disease, to understand its present and potential importance. You will readily see therefore the need for those of us in medicine to have a thorough and well founded knowledge of nutrition and nutritional deficiency disease.

One important medical aspect of nutrition is the detection or diagnosis of nutritional deficiency disease. As in all diagnosis the attempt should be made to diagnose the deficiency at the earliest possible stage and, as you well know, the earlier one attempts a diagnosis the more difficult, as a rule, it becomes.

The ultimate objective of the early recognition of nutritional deficiencies is to detect the first or slightest structural or functional abnormality resulting from a deficiency of one or more nutritive factors. This is a goal very difficult to attain, involving as it does the detection of abnormalities ranging from simple changes in the structure of such tissues as the skin or conjunctiva to very subtle disturbances in immune processes. So far these objectives have only been approached. Nevertheless, a number of methods and procedures have been developed for this purpose which are of assistance in the early diagnosis of nutritional deficiencies and which have the possibility of further development and improvement.

As would be expected in any procedure involving the detection of an abnormality before gross changes are apparent, these methods, almost without exception, are laboratory tests or special procedures using such techniques as microscopy. It is sometimes forgotten, however, that such diagnostic tests, particularly when applied to human subjects, are subject to all the limitations and qualifications which apply to diagnostic tests in general and determine their value and usefulness. This has led to a great deal of confusion and misunderstanding, in part at least, because many non-medical persons who have become interested in nutrition have failed to appreciate, or never knew, about these limitations. It is my intention, therefore, first to discuss some of the principles which determine the value of these tests and procedures, and then to discuss some of the various tests themselves, their fundamental characteristics, their classification, their similarities and their differences, their meaning, their limitations and their value.

The principal qualities which determine the value of diagnostic tests in general are: 1) specificity; 2) the frequency with which they are "positive"; 3) their applicability; and 4) their reliability (accuracy). Figure 1.

Specificity of at least a moderate degree is necessary if a test is to have any practical value. Lack

*Annual Alpha Omega Alpha Lecture, presented at the University of Virginia Medical School, 9 March 1945.

of specificity in the slight or early stages is one of the principal defects of many of the common symptoms and physical signs of deficiency states, symptoms and signs which otherwise would be very useful and important in diagnosis. Fortunately the opportunity of developing tests of relatively great specificity in these diseases is good because the specificity of action of the various nutritive substances is likely to mean an equally specific effect from a shortage of them.

Tests may be highly specific, yet for one or another reason fail to be positive in more than a small percentage of those who have the disease. The reasons for the failure of a test to be positive more consistently are many and varied. A good example from another field is the Wassermann test which although positive in a high proportion of some types of syphilis, in others is positive in scarcely more than half the cases. In nutritional deficiencies then, as in other disease, a test or sign must be positive in a reasonably high percentage of cases to be worthwhile.

Applicability means the extent or ease with which the tests can be used under given circumstances. For example, it is possible to detect changes indicative of early or slight vitamin A deficiency by histologic examination of the bronchi but such an examination is not ordinarily possible with human subjects, except post mortem. Similarly a test which requires several hundred cubic centimeters of blood, or the cost of which is excessive, is of little value. Obviously there is a large element of practicability and suitability in this respect and such terms might well be used instead of applicability.

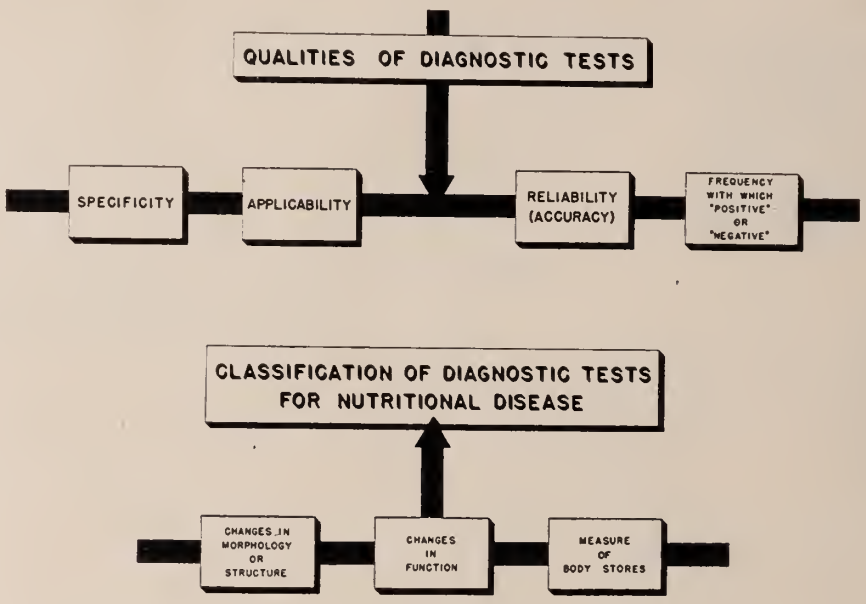

Fig. 1.

Finally the tests or procedures must be reasonably reliable and accurate. Tests which are subject to gross technical error or uncontrollable variation are unsuitable.

Of these qualities the first, specificity, is the most important. When a highly specific test is positive it becomes a pathognomonic sign. When such tests are positive in a large percentage of cases they become very valuable signs indeed. Pathognomonic signs and tests are very rare in medicine generally, and may be expected to be rare in the nutritional deficiency diseases.

Although the value and usefulness of diagnostic tests and procedures depend on the qualities I have just described, the relative importance of these qualities will vary according to the particular use which is to be made of the test or procedure. Again, much confusion and misunderstanding has occurred because of failure to recognize and appreciate this fact, particularly by those not trained in medicine. In general these diagnostic tests for nutritional deficiencies are used in 1) the practice of medicine;

2) in research, and, 3) in surveys or assessment of the nutrition of populations. The requirements with respect to applicability, reliability, frequency of occurrence and specificity are not the same in all three instances. Tests which are suitable for clinical use may fail for research or survey purposes. A lack of accuracy or frequency of "positiveness" which would be prohibitory in the patients might be permissible, though not desirable, in mass studies, in which numbers compensate to some degree for these defects. Research is apt to demand a high degree of specificity and accuracy but the circumstances may permit difficult, complicated and expensive techniques which would be impossible in mass examinations. Clinical diagnosis allows the use of repeated tests, of multiple tests, utilizes long periods of observation and the help of a large amount of contributory information. Surveys require simple, rapid, relatively inexpensive procedures suitable for the examination of many subjects in a short time. Thus, the way in which a test or procedure is to be used will in a large measure determine its value and usefulness.

Turning now to a discussion of the various tests and procedures which have been proposed or developed for the detection of nutritional deficiencies and remembering that we are dealing with the *early diagnosis* only, we find that these tests can in general be divided into three groups or classes; 1) those dealing with changes in morphology or structure; 2) those concerned with changes in function, and, 3) those based on a measure of the store or body reserve of a particular nutrient.

Tests of the type which are concerned with changes in morphology or structure (Figure 2) include the detection of changes in the epithelium of the eye and skin in vitamin A deficiency, the changes in the tongue, buccal mucosa, and other mucous membranes in niacin deficiency, demonstration of vascularization of the cornea and changes in the skin and tongue in riboflavin deficiency, abnormalities in the structure of the gums in vitamin C deficiency, and structural changes in the bones in deficiencies of vitamin D and calcium. To these could be added the changes in the red cells in iron deficiency anemia and the edema of protein deficiency.

As a group these tests suffer from a relative lack of specificity. Such simple tissues as the conjunctiva and the gums tend to react in the same way to a variety of injuries and this is particularly true in respect to slight or early injuries. Slight conjunctivitis is much the same in appearance whether caused by vitamin A deficiency, simple fatigue and loss of sleep, or exposure to dust. Decreased lacrimation tends to distinguish the conjunctivitis of vitamin A deficiency from other similar conjunc-

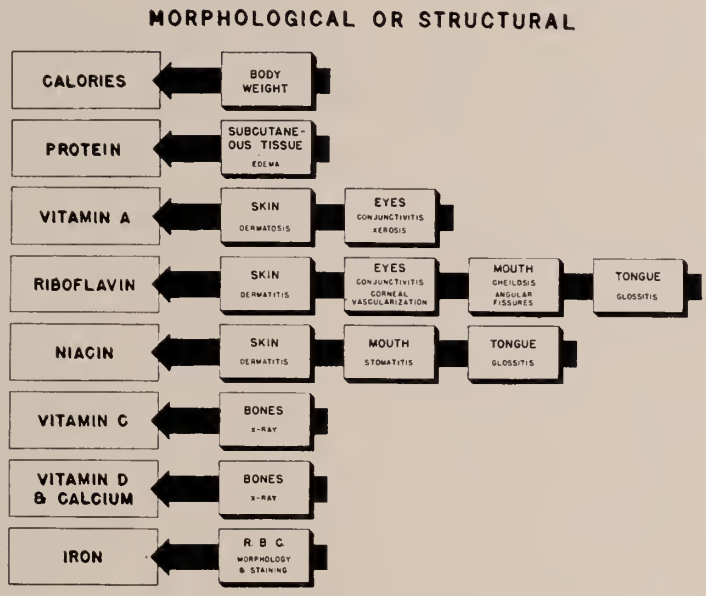

Fig. 2.—Morphological or Structural Diagnostic Tests of Nutritional Deficiency Disease.

tivitis, but this is not apparent in the earliest stages and it is difficult to detect with certainty slight deficiencies in tearing.

The epithelium of the tongue, being more specialized than the conjunctiva, might be expected to exhibit alterations more characteristic of the various deficiencies which are thought to affect it. Apparently, however, there are at least 5 or 6 distinct types of glossitis, of which at least three seem related to extrinsic dietary deficiencies. While they present certain individual pecularities which may help to identify them in the more severe deficiency states, it is often difficult, if not impossible, to distinguish between them in the earlier and milder deficiencies by ordinary means of examination.

Recently Kruse[1] has studied the lesions in the sclera, tongue and gums, especially those observable in the earlier and milder stages of vitamin A, niacin and vitamin C deficiency, with special illumination and suitable magnification. He believes that by these means he can detect lesions which are characteristic of deficiencies of each of these nutrients. These lesions Kruse had divided and sub-divided into a number of classes depending on degrees of severity and duration (acuteness). These observations are very valuable and have contributed a great deal to our understanding of nutritional deficiency disease, especially the concept of the significance of intensity and time. However, while it seems certain that some of the changes he described are a result of those deficiencies, his work has not yet received adequate confirmation in all of its aspects. In particular, doubt exists as to the specificity of some of these changes. For instance, he fails to contrast and distinguish between the glossities of pernicious anemia, or sprue, or ariboflavinosis and that of niacin. By ordinary standards changes occurring in these three diseases cannot be clearly distinguished.

An example of the difficulty to be encountered in reference to such a matter of specificity is the following experience. A young man of normal antecedents, particularly in reference to nutrition, was treated with large doses of nicotinic acid on the basis of its pharmacologic, not nutritive, properties. During the treatment and some four weeks after treatment was begun he developed a glossitis which on examination with a slit lamp showed characteristics which could only be interpreted as indicative of "acute, severe" nicotinic acid deficiency according to Kruse's criteria. Even allowing for the slight exacerbation in symptoms which sometimes occurs in nutritional deficiencies at the start of specific treatment, it hardly seems possible that such a deficiency could exist in view of the amount and length of time of nicotinic acid administration.

Furthermore, following Kruse's criteria, there is the failure of certain lesions to heal despite long periods of adequate specific treatment, a result which is contrary to the usual effect of such treatment in nutritional deficiencies. These lesions are, notably, the deep fissures in the tongue and so-called retraction of the gums, both indicating actual destruction and loss of tissue. These lesions, with some of the alterations in the sclera, appear to be particularly resistant to treatment. This arouses doubt as to their specificity, though the failure is ascribed by Kruse to the severe and especially to the chronic nature of the lesions. It seems very possible however that such lesions, if they do represent deficiencies, are scars of deficiency, the residue of a deficiency existing at some prior period and no more indicative of active disease than the permanent atrophy of an old, cured thiamine deficiency, or the rachitic rosary of a forgotten childhood rickets.

We have found certain of the lesions of the sclera, described by Kruse as characteristic of slight or early vitamin A deficiency, in young individuals whose dietary intake of vitamin A by ordinary standards was and had been normal for long periods. At the same time these subjects were exposed to trauma of light and dust. We have found that the same kind of lesions show a decided correlation with age, increasing with the years, despite the generally higher body store of vitamin A in adults, suggesting an effect of age itself and the accumulative effect of small non-nutritional insults. Changes in the gums similar to those attributed by Kruse to vitamin C deficiency have been ascribed and, with good reason, to such causes as deposits of tartar, cervical fillings and infection. We have observed a direct correlation between increasing age, poor oral hygiene, and a rising incidence of changes in the gums often thought to be due to ascorbic acid lack, although the younger groups showed an equal frequency of deficient vitamin C intake and an equal incidence of low concentration of ascorbic acid in the blood. It is true that such relationships do not prove the nonspecificity of such lesions, but, it is strong evidence against their being specific.

Although the capillary invasion of the cornea associated with a deficiency of riboflavin is not altogether unique in its characteristics it can be distinguished fairly easily from certain other types of vascularization—that due to syphilis for example. However, it now appears that in a good many instances vascularization, recently thought to be caused by riboflavin deficiency, has some other cause.

We have found corneal vascularization that bore no clear relationship to the dietary intake of riboflavin nor to other evidence of riboflavin deficiency.[2] For a time we and others felt that light, acting perhaps on slightly deficient subjects, might be a cause for such vascularization but that was found not to be true. A public health service study[3] revealed a large number of instances of corneal vascularization, apparently dietary but not yielding to adequate treatment with riboflavin. Therefore, though riboflavin deficiency may cause vascularization of the cornea, the latter is not a very specific sign.

It seems quite certain that fissures at the corners of the mouth occur in riboflavin deficiency. Excellent examples are also seen, however, in persons with false teeth, who fail to respond to large and even parenterally administered doses of riboflavin. Therefore, unless one wishes to argue that such persons are unable to utilize riboflavin, it must be concluded that the fissures are due to some other cause than riboflavin deficiency. Some have been healed with liver extract.

Even the well known and on the whole specific lesions in the bones in rickets are difficult to distinguish at times from other lesions, such as those caused by scurvy (vitamin C deficiency), and some of the changes observed in x-ray photographs and interpreted by some workers as manifestations of early rickets are not accepted as such by other authorities.

In general a poor correlation exists between structural changes and dietary intake of the respective food factors as well as certain other tests of nutritional deficiency. This is because structural changes require in general a longer time to appear or disappear than the more rapid shifts in intake, chemical lesions, disturbances in function and the like, changes in the latter occurring before they can be reflected in changes in structure. This is particularly true at levels of slight and temporary deficiency.

Another criticism of the morphological or structural tests and signs is found in the fact that changes in function probably precede changes in

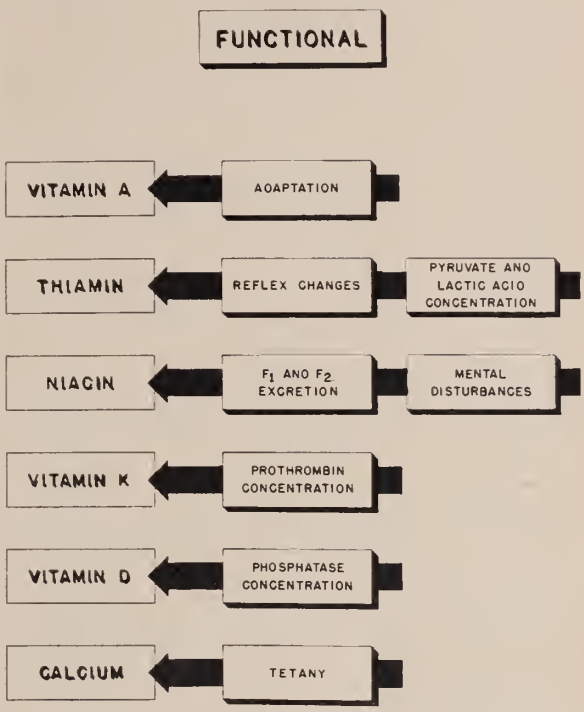

Fig. 3—Functional Diagnostic Tests of Nutritional Deficiency Disease.

structure and hence the latter are probably a later expression of a deficiency. This objection is often more theoretical than practical because of the absence of suitable corresponding tests of disturbed function, but the possibility and opportunity of developing tests of function to supplement or supplant morphological signs should be borne in mind.

Despite these drawbacks the morphological changes remain useful, sometimes the most useful of the tests of a deficiency. This is particularly true in regard to applicability and expense and for individual patients in whom the effects of a therapeutic trial can be observed. Under the latter conditions their reliability and specificity are greatly increased.

The second group of tests are the tests of function, the physiological and chemical tests. (Figure 3). These include the measurement of visual adaptation to the dark for A deficiency, the detection of spontaneous and induced increase in the concentration of pyruvic and lactic acids in the blood for thiamine deficiency, the excretion of Najjar and Holt's F_1 and F_2 fluorescent substances in the urine in pellagra, the determination of the alkaline phos-

phatase concentrations in the blood for vitamin D (and calcium?) deficiency, the determination of prothrombin concentration for vitamin K and the concentration of hemoglobin in the blood for iron.

Such tests are theoretically the most desirable, first, because concerned with function they have the possibility of detecting the earliest abnormalities of a nutritional deficiency, and second, as pointed out, because the highly specific nature of nutrients generally makes possible alterations in highly specific functions. One difficulty comes in finding the functions that are characteristically altered and can be satisfactorily tested. In some cases the function in question is affected in a similar way by a variety of abnormal conditions which are difficult to separate from the nutritional deficiency, though this is not common in this group. In others, the function in question is so easily modified by minor pathologic or even physiologic causes that it is difficult to set a point at which the abnormality becomes significant. Hence, the test is not very reliable and in such cases the tests are apt to be significant only when the deficiency is relatively severe or chronic, a time when other manifestations make such evidence useless.

In some instances the tests are technically difficult and even inaccurate and thus lacking in reliability and applicability. In other instances the test itself is sufficiently accurate but the results are affected by errors of a sort which are difficult to control, such as the error of the subject's response, as in the adaptometer test.

Perhaps the most satisfactory test of this group is the test of prothrombin concentration which detects a deficiency of vitamin K. This test has an added advantage in that there occurs a period of warning in which the results of the test indicate the threatened occurrence of a pathologic state before it actually occurs. In this it resembles the tests of body stores or reserve.

The excretion of fluorescent substances F_1 and F_2 as used in the diagnosis of pellagra or niacin deficiency, still lack significance because of uncertainty as to the exact nature of the chemical lesion which is reflected by the alteration in the excretion in the urine of these two substances. Furthermore, it appears that the excretion of these substances is not significantly altered until a rather severe deficiency exists, until indeed so gross a lesion as the dermatitis is present.

Pyruvic acid determinations for diagnosing thiamine deficiency are somewhat difficult technically and hence also somewhat unreliable. The concentration is much affected by exercise and to some extent by other disease. This makes it necessary to control the test carefully and its applicability is limited.

The measurement of visual adaptation to the dark (dark adaptation) used for the detection of early or slight deficiency of vitamin A would seem to be an ideal test of the functional type. There is little doubt that lessened ability to see in diminished light develops in vitamin A deficiency. Though the specificity of the change has been attacked and though we have observed some effect of increasing age,[4] it is probable that relatively few conditions affect this test in a practical way other than vitamin A. The difficulty seems to lie in a lack of reliability of the test and that because of a somewhat peculiar reason. The accuracy of many of the instruments is so great that so-called abnormal readings have been observed within the range of error of the subject's response. This has led to doubt of its reliability. It is probable, however, that when taken at levels of rather definite impairment, it may still be a helpful sign and one detectable before many of the other manifestations. This will depend to some extent on the duration or chronicity of the deficiency, which indicates another point of importance in evaluating these tests. For example, the concentration of alkaline phosphatase in the blood apparently has the advantage of remaining elevated, and hence positive as long as the lesion is active and long after other signs of the active disease may have disappeared.

All of the tests in the functional group are greatly improved when combined with a therapeutic trial and most of them are suitable for clinical or research use. Some are difficult or impractical however for survey or mass examinations because of technical difficulties or cost.

The third group of tests for the early detection of nutritional deficiencies are those which measure the stores or reserves of the respective nutritive factors in the body. (Figure 4). This is done by determining the rate and degree of excretion of the various substances, or their concentration in the blood or other body tissues. Tests of this kind include the concentration of vitamin A, thiamine, cocarboxylase, niacin, vitamin C, calcium, and plasma protein in the blood; the excretion, spon-

taneous or following a test dose, of thiamine, vitamin C, riboflavin and nicotinic acid, the x-ray examination of bone for demineralization and the hemoglobin concentration.

Determination of the concentration of the calcium in the blood seems to have little value in the early recognition of different states because the large reserve prevents a lowering, except in severe and continued deficiency. Similarly, the concentration of niacin in the blood does not appear to be reduced

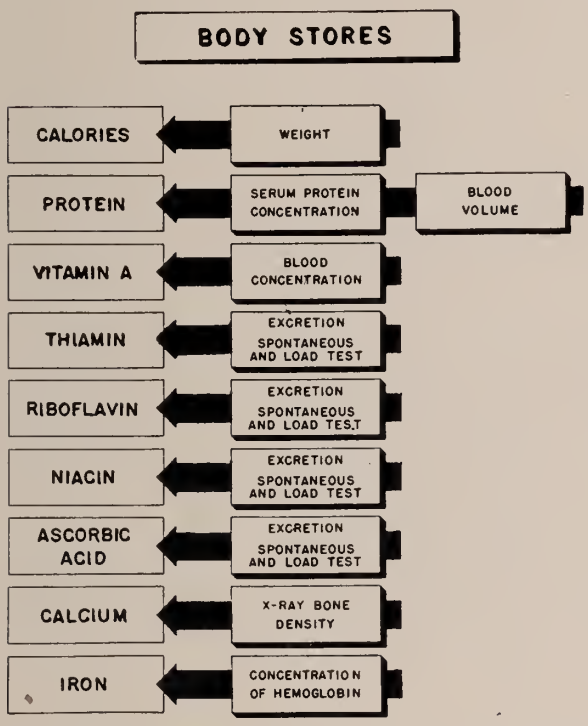

Fig. 4.—Body Stores Diagnostic Tests of Nutritional Deficiency Disease.

in most instances until a far advanced deficiency state is present and not always then. Somewhat the same may be true of thiamine and cocarboxylase though there is some evidence that this may be a true index of body reserves. The urinary excretion of niacin suffers as a test from an undeterminable variation between the forms in which it is executed and the effect of endogenous and exogenous substance involved in this process. On the other hand, the blood levels of vitamin A and ascorbic acid seem reasonably good measures of the body stores of these vitamins and are relatively simple and reliable tests. The concentration of plasma proteins is also valuable though probably not "positive" until considerable loss and even pathologic changes have occurred. There is evidence that changes in blood volume may be a better early test. The excretion of vitamin C in the urine is very useful, is easy to determine and is reliable. Much the same is true of the excretion of thiamine though the test is harder technically. X-ray of the skeleton for determining the store of calcium suffers from an inability to determine and measure the degree of slight demineralization with sufficient certainty. Hemoglobin accurately measures a lack of iron stores but is quite non-specific.

A fundamental difference exists between these tests and those of disturbances in structure or function in that the detection of a depleted store does not mean, necessarily, a diseased or pathologic state. The great difficulty, in fact, with these tests of store or reserve is to determine at what level of body content a pathologic state appears. Furthermore, the unequal distribution of some of the nutritive factors in the various tissues and organs of the body, the difference in the effect of deficiencies on their concentration in various tissues and questions of the size of the reserves in some instances, cast doubt on the significance of some of these tests. On the other hand, these tests often have the important practical advantage of possibly anticipating a significant deficiency and it is probable that when the store or reserve is greatly reduced a disturbance in function or structure exists whether we can detect it or not. Certainly, in clinical medicine, the existence of an inadequate reserve in a patient who may be subject to increased demands, unusual destruction, difficulty in utilization or failure in intake of essential nutrients, places him in a precarious, vulnerable position and the detection of such a state is important in relation to prophylactic or curative treatment. Similarly a population existing in a state of bare maintenance is ill equipped for the vicissitudes which may beset it.

On the whole the store or reserve tests are technically simple, reliable and easy of application, useful in medical practice, research and for public health purposes. Furthermore, they have to a considerable degree the quality of quantitative application, as, for example, the relationship between the concentration of ascorbic acid in the blood plasma and in the leucocytes, concentration in the former falling before concentration in the latter. Even when actual pathologic deficiency almost certainly exists, a quan-

titative test of the deficiency may be made by observing the response to successive test doses. (Figure 4.)

One drawback, not yet entirely overcome, is the lack of adequate standards. The multiplicity of slight modifications of the various basic techniques has tended to prevent the accumulation of sufficient experience for any one of them. Another drawback has been the failure to obtain a general agreement on the amount of the body stores or reserve below which a deficiency is judged to exist. Nevertheless, on the basis of specificity, reliability and applicability these tests are among the most valuable and reliable tests for the early clinical detection of nutritional deficiencies at present.

CONCLUSION

The lesson to be drawn from this consideration of the early diagnosis of nutritional deficiencies is fairly obvious. The various tests and procedures which are available and are being used for detecting a deficiency of any one of the various nutritive factors may and do differ in their fundamental nature, their significance and their application. Frequently, they represent abnormalities which differ in kind, and in the degree or period of the deficiency, though still within the sense of early recognition. Each is, or may be, subject to qualifications or restriction in interpretation different from that of other tests used for the detection of a similar deficiency. Direct comparison between individual tests may be impossible and under many circumstances correlation between a group of tests is not necessarily to be expected. All are subject to a variety of influences, many of them unknown, which are always to be encountered when dealing with human subjects. Only if these facts are properly appreciated can our present methods be used to best advantage in the early detection of deficiency disease and form the basis for improvement in the future.

BIBLIOGRAPHY

1. Kruse, H. D.: Medical Evaluation of Nutritional States IV, The Ocular Manifestations of Avitaminosis A, with Especial Consideration of the Detection of Early Changes by Biomicroscopy, *The Milbank Memorial Fund Quarterly* **19**:207, 1941.

   The Surgical Manifestations of Aniacinosis, with Especial Consideration of the Detection of Early Changes by Biomicroscopy, *Ibid* **20**:262, 1942.

   The Gingival Manifestations of Avitaminosis C, with Especial Consideration of the Detection of Early Changes by Biomicroscopy, *Ibid* **20**:290, 1942.

2. Youmans, John B.; Patton, E. White; Robinson, W. D., and Kern, R.: Analysis of Corneal Vascularization as Found in a Survey of Nutrition, *Jour. Assoc. Am. Physicians* **57**:49, 1942.

3. Sandstead, H. R.: Superficial Vascularization of the Cornea—The Result of Riboflavin Therapy, *Pub. Health Rep.* **57**:821, 1942.

4. Youmans, John B.; Patton, E. White, Sutton, W. R.; Kern, Ruth, and Steinkamp, Ruth: Surveys of the Nutrition of Populations: The Vitamin A Nutrition of a Rural Population in Middle Tennessee, *Jour. Public Health* **34**:368, 1944.

Floral Eponym (36)

HUERNIA KIRKII

KIRK, SIR JOHN, 1832-1922

Huernia is a small genus of succulent, leafless African herbs of the milkweed family. They are greenhouse subjects, mostly from the Cape, but some are from tropical Africa.

Sir John Kirk was stationed in Zanzibar, first as a surgeon, then as a consul-general and political agent for Great Britain. He was born in Scotland, and went as physician and naturalist with David Livingstone on the latter's second expedition to Central Africa. He discovered and brought back to England three new Stapelias or milkweeds. Huernia Kirkii from the Transvaal bears his family name, although it was named for his son Lieutenant J. W. C. Kirk.

THE PRESENT STATUS OF THIOURACIL IN PREPARING THYROTOXIC PATIENTS FOR SURGERY*

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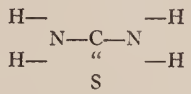
Most of us recall vividly the exacting and exhaustive care necessary in the treatment of the hyperthyroid patient and how much real advantage was gained when Plummer[1] introduced iodine in 1923. The thyrotoxic patient was, even with iodine preparation, still a great surgical risk in many cases, and those patients, maintained on iodine alone, frequently became iodine-resistant and serious therapeutic problems. Experimental work on other therapeutic agents has therefore continued and recently much promising material has resulted from this research.

A summary of the literature and a report of our experience with thiouracil is presented.

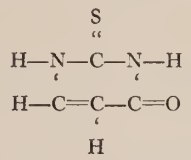
In 1941, the Mackenzies and McCollum[2] reported that sulfanilylguanidine was goitrogenic and reduced the basal metabolic rate in experimental animals. Richter and Clisby[3] reported similar results with thiocarbamide in 1942, and in the same year Kennedy[4] observed hyperplasia of the thyroid gland with a drop in basal oxygen consumption using thiourae and its derivatives. In 1943, Astwood[5] studied many of these substances and found that 2- thiouracil was relatively non-toxic, potent in producing hyperplasia of the thyroid gland, dramatically reduced the B.M.R., and, most importantly, its goitrogenic effect was *not* impaired by the coincident administration of iodine. (The thiocyanate group of drugs was found to be ineffective when used in conjunction with iodine). Astwood,[6] in the same year, used thiouracil in human subjects with promising results, thus beginning its clinical application.

Following these reports thiouracil was released to several investigators for controlled experimental clinical use. Many of these individuals and groups have reported their observations and the literature becomes more voluminous with the publication of each new article. Among the reports are those of Williams and Bissell[7]; Himsworth[8]; Bartels[9]; Moore, Sweeny, Cope, Rawson and Means[10]; Williams and Clute[11]; Lahey[13]; Clute and Williams[14]; McGregor[15]; Paschkis[16]; and others.

Thiourea is a sulfur analogue of urea, with the formula:



Thiouracil is a heterocyclic derivative of thiourea, with the formula:



Thiouracil is a white crystalline powder, soluble in alkaline solution and slightly soluble in water. It is stable in solution or as a powder. It is odorless but bitter in taste. It is usually administered in tablet form in 0.1* or 0.2 gram doses.

On ingestion, most of the drug is rapidly absorbed and is found throughout the body fluids and tissues, although some of it is destroyed in the gastro-intestinal tract.[7] The blood level is highest an hour or two after administration and traces are present in the urine within 30 or 40 minutes.

The probable mechanism of action may be briefly stated as follows:

In *thyrotoxicosis* some unknown factor over-stimulates the pituitary gland which then increases its output of thyrotropic hormone, causing hyperplasia of the acinic cells of the thyroid gland and increased production of thyroxin. This over-supply of thyroxin soon produces the clinical symptoms of hyperthyroidism.

In treatment with Lugol's solution, increased amounts of iodine are stored as colloid in the thyroid gland and, as the acini are distended with colloid, the epithelium is compressed and rendered less active in thyroxin production. The same compression effect renders the gland less vascular. The un-

*Read before the Seaboard Medical Association of Virginia and North Carolina at Virginia Beach, December 11-13, 1945.

*2-Thiouracil (Deracil) was supplied by the Lederle Laboratories, Inc., Pearl River, New York. It has not as yet been placed on the market.

known stimulating factor remains in excess but by this mechanism is made less effective and *some* amelioration of the thyrotoxic state is observed clinically.

Thiouracil apparently acts locally on the thyroid cell, causing thyrostasis and preventing the incorporation of iodine into di-ido-tyrosin and thyroxin thus halting colloid secretion. The drug does not affect the unknown stimulating factor or the pituitary gland; the pituitary gland rather tends to increase its output of thyrotropic hormone and thyroid cell hyperplasia becomes more marked. The remaining colloid substance in the thyroid gland (containing thyroxin formed before treatment) is gradually depleted in metabolism and a *complete* remission from thyrotoxicosis is observed.

The hyperplastic changes in the thyroid gland caused by increased pituitary hormone are accompanied by hypertrophy of the acinic cells and a marked enlargement of the vascular network. The enlarged soft thyroid cells formed about nearly empty acinic spaces and surrounded by an enriched vascular bed present an extremely friable gland which tends to bleed excessively on section and which does not hold suture material well. This problem, encountered while using thiouracil alone in preparation, greatly increased the technical difficulties of surgery. We have found that the administration of iodine in the final 14 days of pre-operative treatment produces colloid reconversion in the gland and thus prevented the friability and tendency to hemorrhage. Others have suggested the administration of iodine with thiouracil in the final 2 or 3 weeks of pre-operative treatment with iodine alone in the final week.[13] Our method has been to discontinue thiouracil when the B.M.R. and pulse rate reach normal levels and to administer iodine for the final 14 days (Dosage 10-15 gtts. of Lugol's solution, b.i.d.).

Thiouracil dosage is, of course, individualized but in most cases the optimum level is about 0.6 gram daily. When treatment is first begun a dosage of about 0.2 gram daily is used for one week; then 0.4 gram daily for one week; then the optimum dosage of 0.6 gram daily for the following weeks is continued if no adverse signs develop with the early doses. The drug is administered in two 0.1 gram tablets every 8 hours, since thiouracil is excreted rapidly (1/3 is lost in the urine and about 50% is destroyed by the body tissues)[7] and the highest blood level occurs in the first hour after administration. There is a variable latent period after thiouracil therapy is begun of 7 to 10 days during which time the symptoms of thyrotoxicosis may slightly increase and there may be a slight further loss of body weight. After this period, the patient feels better often before appreciable clinical effect is observed. Then the pulse rate begins to slow, body weight increases, the B.M.R. begins a progressive fall toward normal and nervousness, irritability, tremor and heat intolerance soon disappear. The use of iodine in the final two weeks effects a colloid reconversion in the thyroid gland and eliminates friability and tendency to hemorrhage without in any way altering the metabolic stability of our patients.

The gradual increase of thiouracil dosage in the beginning weeks of therapy is governed by several factors that we have found very valuable as indicators. With each weekly checkup we examine the blood and note the size of the gland. The pulse rate, weight and B.M.R. are obtained and recorded and some note is made on the general improvement of the patient subjectively and objectively. The patients are told to report any unusual symptoms whenever they occur, and are cautioned not to wait until their appointment date which may be several days later. In a few cases an appreciable enlargement of the thyroid gland has been observed. We believe it wise to decrease the dosage when this occurs since it is an abnormal reaction and such cases present a complicated operative picture. Exophthalmos may be increased in some cases, forcing a reduction and sometimes discontinuance of the drug.

We have noted a very useful correlation between the original B.M.R. figure and the number of days required to prepare patients for surgery. (A similar relationship, using a different combination of thiouracil and iodine, has been noted by others).[13] We have found in a majority of cases that the number of days of treatment before surgery almost exactly equals the original B.M.R. figure. For example: Patient (X) has original B.M.R. of plus 49. Patient (X) is ready for surgery 49 days later. (Five weeks on thiouracil to bring B.M.R. to normal; then two weeks on iodine for colloid reconversion). It should be noted that patients who have had iodine therapy previously are refractory to thiouracil and their pre-operative treatment may be protracted

for several weeks.

Two case reports are submitted as being fairly typical of our series. In addition to complete histories and physical examinations on all patients, we have kept special notations of blood pressure, cardiac status, pulse rate, tremor, size of gland, body weight (usual and present), and complete blood counts and urinalyses. In our earlier cases before we knew the precise role of thiouracil we used iodine and thiouracil together from the outset and preparation for surgery was unnecessarily protracted. We feel now that any system tending to lengthen the time of thiouracil therapy is dangerous. This will be mentioned again in discussing thiouracil as a "medical" drug.

Case I.—4-12-45: J. A. D. This 54 year old white man, usual weight 150 pounds, had noted nervousness and a 30 pound weight loss, insomnia and weakness for the past 12 months. On examination he was markedly emaciated, weighed 120 pounds, and there was a gross tremor of the extremities. The pulse rate was 120, basal metabolic rate was plus 55, and no thyroid mass was palpable. Laboratory work was negative. Thiouracil 0.2 gram b.i.d. was begun.

4-19-45: General condition unchanged. Pulse rate 120. Marked Tremor. Weight 119½ pounds. B.M.R. plus 50. White cell count normal.

4-28-45: Patient felt generally better. Very slight clinical improvement. Pulse rate 128. Better appetite but still had insomnia. Tremor was less marked. Thiouracil increased to 0.6 gram daily and given phenobarbital one grain twice daily. Weight 124 pounds. WBC normal.

5-4-45: Patient eating and sleeping well. Marked clinical improvement. Very slight tremor. Pulse rate 92-96. Weight 131 pounds. WBC 6,300. Polymorphonuclears 45%. Continued thiouracil 0.6 gram daily.

5-11-45: Patient felt especially well. No tremor. Pulse rate 84. B.M.R. plus 15. WBC 8,200. Polys. 50%.

5-18-45: Patient asymptomatic. Pulse rate 82. Weight 137 pounds. B.M.R. minus 5. Thiouracil reduced to 0.2 gram daily and patient put on Lugol's solution 15 gtts. b.i.d.

5-28-45: Bilateral subtotal thyroidectomy under pentathalsodium anesthesia with normal post-operative convalescence and no storm.

The patient is well and healthy at the present time.

Our present regime is to take B.M.R., white cell count, differential count, body weight weekly, and thiouracil is discontinued when metabolism becomes normal. Lugol's solution, 10 to 15 gtts., b.i.d., is then administered for the final 14 days before operation. The patients are instructed to live a very conservative life during the period of preparation. Alcohol and tobacco are forbidden. Coffee and tea may be used in moderation. A regular but non-stimulating diet is recommended and meals should be at regular hours. No strenuous exercise is allowed and exposure is to be avoided. The patient should have eight or more hours of sleep nightly and work involving much physical activity should be avoided. All of our cases were managed as out-patients and admitted to the hospital the day before operation was done.

Case II.—H. L. B. This 28 year old white woman had a bi-lateral subtotal thyroidectomy for hyperthyroidism on May 4, 1939 (6 years ago) from which she recovered and remained entirely well. She has had two children since her operation, the last 11 months ago. Since the birth of this last child she has become increasingly nervous, had a rapid pulse, but no weight loss.

4-17-45: The patient was nervous and excitable and there was a marked tremor. There was a small mass in the left lobe of the thyroid gland. Weight, 126 pounds. Pulse rate, 118. B.M.R. plus 43. Begun on 0.4 gram thiouracil daily.

5-2-45: Patient complained of weakness but appeared clinically improved. There was a slight tremor. Pulse rate 72. Weight 130½ pounds. B.M.R. plus 18. WBC 6,100. Polys. 49%. Continued on 0.4 gram thiouracil daily.

5-14-45: Patient had no complaint. Clinically much improved. There was no tremor noted. Weight 134 pounds. WBC 5,800. B.M.R. minus 2. Thiouracil discontinued. Patient put on Lugol's solution 10 gtts. b.i.d.

5-23-45: Surgical Treatment: A small amount of tissue was resected from the right lobe and six grams of tissue from the left lobe. The gland was firm and colloid in consistency. There was no bleeding. Operation and postoperative course were uncomplicated.

She is entirely well at the present time.

The opinion of some investigators is that cases with a basal metabolic rate of plus 35 or less should

be prepared with iodine. We feel that this is an erroneous idea since iodine at best can only reduce the B.M.R. It never brings about the complete remission of thyrotoxic symptoms that is obtained with thiouracil. Thyroid storms and crises before, during and after surgery are sufficiently frequent to gravely increase the operative risk with iodine therapy even in cases whose B.M.R. was less than 35 initially.

With two exceptions, our patients have been admitted in the afternoon, gone to surgery the following morning, remained asymptomatic throughout, and have been discharged on their 5th to 8th post-operative day. In two cases, anesthesia was taken poorly, there was a rapid rise in pulse rate and marked widening of the pulse pressure. This necessitated the removal of only one lobe of the thyroid and deferring the second stage for 4 or 6 weeks. However, at the second operation both patients sustained it uneventfully and have remained asymptomatic since.

We have been fortunate in our series of cases in respect to toxic reactions to thiouracil. Only two cases have shown a leukopenia. Levels of 4,000 and 2,900 white cells were encountered and the drug discontinued for a time. However, these patients were re-established on smaller doses of thiouracil, came to operation without further adverse symptoms, and had smooth post-operative convalescences. There are many reports of toxic reactions to thiouracil in the literature, and several fatalities[6, 7, 10, 11, 13, 14, 15, 17, 18, 19, 20, 23, 26] from agranulocytosis have been described. These authors are agreed that the most serious toxic manifestation is leukopenia, which may rapidly progress to true agranulocytosis. The evidence of this complication (leukopenia) is reported as low as 8% and as high as 20% of cases treated. Whichever percentage is accurate, frequent regular blood examinations are an obvious necessity during thiouracil therapy. A good method of insuring the patients' return for check-ups is to supply them with only enough drug to last for 5 to 7 days. The occurrence of any significant fall in the white cell count necessitates discontinuing thiouracil. Two therapeutic agents have been suggested for treatment in cases of granulocytopenia: Pyridoxine (Vitamin B-6) 150 mgm. daily by mouth, and, if severe, 200 mgm. intravenously[20, 21]; and penicillin[22] 20,000 units every 3 hours. Whole blood transfusions are recommended as well.

Other major reactions reported are fever, jaundice, dental infections, dermatitis, leg edema and swelling of the salivary glands. Several less severe reactions are also reported. Among them are headache, malaise, nausea, diarrhea and anorexia. It is reported that all major and minor toxic reactions, excepting only the severe leukopenias, subsided with prompt cessation of thiouracil. When such untoward reactions occur, the drug must be readministered with extreme care and a recurrence of toxic reaction may force the surgeon's hand, necessitating operation although the ideal pre-operative metabolic status has not been obtained.

Thiouracil is particularly indicated in patients with very high metabolic rates and in unstable, hard to regulate cases that would ordinarily be scheduled for stage operations. Such cases respond well to the drug and will usually come to surgery well stabilized and stage operations are rarely necessary.

Thyrocardiacs with decompensation, diabetics and pregnant patients with thyrotoxicosis have never been as well managed as at present. With the fall of the basal metabolic rate, decompensation tends to disappear rapidly; with diabetics the blood sugar level drops toward normal as the B.M.R. falls.[20] Thus, cases which formerly were extremely hazardous, if not impossible surgical risks, can now be brought to surgery with a very favorable prognosis.

There are certain cases in which surgery is imperative, particularly those with very large glands, those who cannot tolerate the drug for toxic reasons, and those cases that will not cooperate and will not come in for weekly check-ups while under preparation with thiouracil.

There are a number of cases in the literature that have been treated with thiouracil from a medical viewpoint[26] and have been followed for 12 or more months on the drug. Preliminary reports seem to indicate that about one-half of the cases had a recurrence of thyrotoxic symptoms within two to three months. However, more important than this, the incidence of toxic reactions is greatly increased. Very frequently these cases became refractory to the drug and would not respond when it was re-administered. We are in agreement with others[23] that there is little for and much against the use of thiouracil as a medical drug. It appears at present that the longer thiouracil is used, the more frequently severe toxic symptoms develop. We are all familiar

with the problem of the "iodine-fast" patient, and over-treatment with thiouracil presents even greater problems. In addition to increased incidence of toxicity, if thiouracil is administered beyond a normal B.M.R., there is, in some cases, an unfavorable increase in the hyperplastic effect and a larger goitre results. Also, exophthalmos becomes exaggerated and hypothyroid symptoms may become apparent.

A recent article states that nodular toxic goitres should be removed surgically and should not be treated with thiouracil[24]. The reason given for this statement is that thiouracil is potentially carcinogenic since it causes hyperplasia and mitosis in the epithelial cells. These authors do not in any way qualify their statement. For example, they do not give any figures that will show what percentage of cases with nodular toxic goitre develop carcinoma nor do they cite a single case in which carcinoma has occurred following the use of thiouracil. Our impression is that the occurrence of carcinoma is extremely rare in physiologically hyperactive thyroid glands. The literature shows that practically all glands removed after thiouracil treatment have been examined microscopically by pathologists and, as yet, there are no reports of carcinoma developing in thiouracil-treated glands. We are willing to recognize the possibility of carcinogenesis, but at present we feel that it is sufficiently remote and enormously over-balanced by the vastly reduced operative risk obtained with thiouracil.

We do not believe that thiouracil is the final answer to the treatment of thyrotoxicosis. The perfect drug would be one that selectively inhibited the action of thyroxin or destroyed the excess thyroxin in the body fluids and tissues. Thiouracil does prevent further thyroxin synthesis but produces histological abnormalities (hypertrophy of the acinic cells, increased vascularity). Today many other effective agents are being used experimentally, among them thiobarbital[25] which is sometimes effective in cases refractory to thiouracil, and it is possible that eventually an ideal drug will be discovered. However, we have at present in thiouracil, a highly effective therapeutic agent which may be used safely as the pre-operative treatment of choice in hyperthyroidism if certain relatively simple precautions are taken and if each patient is individualized. In the past 21 months, we have had under our care 45 cases of thyroid disease. Fifteen of these were non-toxic adenomas; the remaining 30 were all toxic problems and thought to have hyperplastic goitre as evidenced by their clinical symptoms. All of these 30 cases were given thiouracil, but, for various reasons, 9 in this group were not subjected to surgery. Twenty-one cases have been prepared for surgery with thiouracil and all have been carried through surgery successfully, although two cases required stage operations. Up to the present time, none of these operated cases have shown any signs of recurrence. Our experience in this small series of operative cases leads us to feel that patients suffering with hyperthyroidism can, in most instances, be more satisfactorily prepared for surgery than with iodine alone, and, furthermore, the burden of post-operative storm has been completely lifted from the shoulders of the surgeon.

BIBLIOGRAPHY

1. Plummer, H. S.: Results of Administering Iodine to Patients Having Exophthalmic Goiter. *J.A.M.A.* **80**:1955, 1923.
2. Mackenzie, J. B., Mackenzie, C. G., and McCollum, E. V.: The Effect of Sulfanilylguanidine on the Thyroid of the Rat. *Science* **94**:518-519, 1941.
3. Richter, C. P., and Clisby, K. H.: Toxic Effects of Bitter-Tasting Phenylthiocarbamide. *Arch. Path.* **33**:46-57, 1942.
4. Kennedy, T. H.: Thiourea as Goitrogenic Substances. *Nature,* London, **150**:223-234, 1942.
5. Astwood, E. B., Sullivan, J., Bissell, A., and Tyslowitz, R.: Action of Certain Sulfonamides and Thiourea on the Function of the Thyroid Gland of the Rat. *Endocrinology* **32**:210-225, 1943.
   Also:
   Astwood, E. B.: The Chemical Nature of Compounds Which Inhibit the Function of the Thyroid Gland. *J. Pharm. and Exper. Therap.* **78**:79-89, 1943.
6. Astwood, E. B.: Treatment of Hyperthyroidism with Thiourea and Thiouracil. *J.A.M.A.* **122**:78-81 (May 8), 1943.
7. Williams, R. H., and Bissel, G. W.: Thiouracil in the Treatment of Thyrotoxicosis. *New Eng. Jour. Med.* **229**:97-108 (July 15), 1943.
8. Himsworth, H. P.: Thyrotoxicosis Treated with Thiourea. *Lancet* **2**:465-466, 1943.
9. Bartels, E. C.: Thiouracil: Its Use in the Pre-Operative Management of Severe Hyperthyroidism. *J.A.M.A.* **125**:24-26 (May 6), 1944.
10. Moore, F. D., Sweeny, D. N., Jr., Cope, O., Rawson, R. W., and Means, J. H.: Use of Thiouracil in Preparation of Patients with Hyperthyroidism for Thyroidectomy. *Ann. Surg.* **120**:152-169 (August), 1944.

11. Williams, R. H., and Clute, H. M.: Thiouracil in Thyrotoxicosis. *New Eng. Jour. Med.* **230**:657-667 (June 1), 1944.
12. Jackson, A. S.: Thiouracil in the Treatment of Hyperthyroidism. *Jackson Clin. Bull.* **6**:146-154, 1944.
13. Lahey, F.: Combination of Lugol's Solution with Thiouracil in the Pre-Operative Preparation of Patients with Toxic Goitre. *Lahey Clin. Bull.* **4**: 2-4 (July), 1944.
14. Clute, H. M., and Williams, R. H.: Thiouracil in the Preparation of Thyrotoxic Patients for Surgery. *Ann. Surg.* **120**:4, 504-513 (October), 1944.
15. McGregor, J. K.: The Use of Thiouracil in Thyrotoxicosis. *McGregor Clin. Bull.* (August), 1944.
16. Paschkis, K. E.: The Treatment of Thyrotoxicosis with Thiouracil. *Med. Clin. North America,* November, 1944.
17. Kahn, J., and Stock, R. P.: Fatal Agranulocytosis Resulting from Thiouracil. *J.A.M.A.* **126**:358-359 (October 7), 1944.
18. Ferrer, M. I., Spain, D. M., and Cathcart, R. T.: Fatal Agranulocytosis Resulting from Thiouracil, *J.A.M.A.* **127**:646-647 (March 17), 1945.
19. Williams, R. H., and Clute, H. M.: Thiouracil in the Treatment of Thyrotoxicosis, *J.A.M.A.* **128**:65-69 (May 12), 1945.
20. Fishbery, E. H., and Vorzimer, J.: Extra-Thyroid Effects of Thiouracil Therapy. *J.A.M.A.* **128**:915-921 (July 28), 1945.
21. Goldsmith, E. D., Gordon, A. S., Kinklestein, G., and Charipper, H. A.: A Suggested Therapy for the Prevention of Granulocytopenia Induced by Thiourea, *J.A.M.A.* **125**:847 (July 22). 1944.
22. Rothendler, H. H., and Vorhaus, M. G.: Penicillin in Thiouracil Induced Agranulocytosis. *J.A.M.A.* **129**:739 (November 10), 1945.
23. Lahey, F., Bartels, E. C., Warren, S., and Meissner, W. A.: Thiouracil: Its Use in the Pre-Operative Treatment of Severe Hyperthyroidism. *S.G.O.* **81**:4, 425-439 (October), 1945.
24. Hinton, J. W., and Lord, J. W., Jr.: Is Surgery Indicated in All Cases of Nodular Goiter, Toxic and Non-Toxic? *J.A.M.A.* **129**:605-606 (October 27), 1945.
25. Bartels, E. C.: Use of Thiobarbital in the Treatment of Hyperthyroidism. *J.A.M.A.* **129**:932-935 (December 1), 1945.
26. Williams, R. H.: The Use of Thiouracil in the Treatment of Thyrotoxicosis. *Med. Clin. North America,* 1043-1053, September, 1944.

Penicillin Cures Early Syphilis.

Major William Leifer of the Army Medical Corps reports that penicillin, administered over an eight day period, was effective in curing early syphilis among Army personnel.

His study, based on 96 patients, is reported in the December 29 issue of *The Journal of the American Medical Association.* Major Leifer stated that the patients received 60 injections of 20,000 units of penicillin in a salt solution at three hour intervals. The total dosage was 1,200,000 units injected into the muscles because this method delays the absorption and excretion of the penicillin better than when it is injected into the veins.

An inflammatory reaction occurred in 88 patients or 91.6 per cent during the first day of treatment. But the author pointed out that "in no case was it necessary to suspend or interrupt treatment because of reactions."

Major Leifer reported little success with penicillin treatment in secondary syphilis. He felt, however, that "results in secondary syphilis can be improved by increasing the size of the individual dose of penicillin, by lengthening the course of treatment or both."

The author concluded that "the effectiveness of a given treatment schedule must be judged by the incidence of relapse, which is greatest in the first six months after treatment, and by prolonged observation of patients to make certain that early satisfactory progress is maintained permanently." A relapse was oberved in only eight of the 96 patients and 71 patients continued to progress satisfactorily after 12 months of observation.

NEUROSYPHILIS WITH A THREE YEAR OBSERVATION OF THE COMPARATIVE THERAPEUTIC EFFECTS OF INOCULATION MALARIA AND ARTIFICIAL FEVER THERAPY

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"Know syphilis and all medicine will be opened to you," quoted from Sir William Osler. Paraphrasing his words to apply to central nervous system syphilis, we would have this maxim, know neurosyphilis and all clinical neurology will be opened to you. These phrases explain just why it is important for all physicians to accumulate all possible knowledge of this somatic disease that is far from being successfully controlled.

Syphilis is America's gift to the world. This disease appeared in Europe in the years immediately following the return of Columbus from his first voyage to America. It spread from Italy with the dispersal of the army of Charles VIII of France in the spring of 1495. The preponderance of evidence for the American origin of syphilis is overwhelming.

In the minds of many patients, a sense of shame, of extreme disgrace, accompanies the knowledge of infection with syphilis. The syphilitic feels himself outcast, unfit to associate with normal persons. His visit to the doctor may be the source of spiritual agony, to be carried out furtively and under cover, with coat collar turned up and hat pulled down. A genuine anxiety neurosis may develop. The physician may do much to alter his mental attitude to enable the patient to adjust himself to his misfortune. Preaching and moralizing are taboo. The patient needs a good psychological prescription. He must be made to realize that syphilis is a disease, not a sin; that the physician is interested in health, not in morals. The proper advice at the proper time should be given with full explanation as to the importance of the treatment, the reason why he should take his treatments as prescribed and to the complications that may develop should he not continue his treatment as scheduled. He should be instructed that if treatment is properly carried out, any of the normal relationships of life are possible, including marriage. The facts of infectiousness must be carefully explained. Psychotherapy is often as important as antisyphilitic treatment to gain the most success. Remember we treat not only the disease, but also the patient. To control the disease and its later complications, the education of the patient relative to the disease is an important factor.

NEUROSYPHILIS

Neurosyphilis can be described as the result of the invasion of the tissues of the nervous system by the Spirochaeta pallida. From an anatomical standpoint, it may be divided into syphilis of the brain and that of the spinal cord. In this is included involvement of the blood vessels and meninges. Pathologically, neurosyphilis is divided into meningeal or inflammatory, and parenchymatous or degenerative. Pathological changes typical of syphilitic lesions in other parts of the body are also characterized in the nervous system.

From the standpoint of the therapist a classification of neurosyphilis may be made on a combined clinical and anatomical basis. This combination divides patients into four groups (Table I).

In the first three groups, the inflammatory element is predominant while in the last group degeneration is manifested. From this, it is plainly seen that the condition in which the parenchymatous lesions are predominant are the most resistant to the treatment instituted.

TYPES OF NEUROSYPHILIS

Dementia paralytica, also known as meningoencephalitic type or general paresis, was first recognized by Bayle as a clinical entity in 1822. The pathology as we know it today was described by Alzheimer and Nissl in 1904. It is a mental disorder characterized by an insidious onset of poor judgment, personality changes, and progressive dementia, accompanied by specific neurological abnormalities and as a rule leading to a fatal termination. This disease is said to be greater in men than in women, and in white than in colored. There is greater incidence of syphilis in the colored race. It was formerly believed that neurosyphilis was considerably more frequent in white than in Negro subjects. Over a period of five years, observation

at our hospital (4000 colored inmates), there is evidence of increasing neurosyphilis in negroes which now almost equals the incidence in the white race. Observation at our hospital reveals the following: Percentage of first admissions with positive blood reaction for syphilis was 14%, while neurosyphilis constituted 19% of first admissions. The decreasing frequency of cutaneous lesions may explain the increasing incidence. Many observations have shown that the patient with florid secondary lesions seldom presents severe central nervous system lesions and *vice versa*. One reason why neurosyphilis may develop in cases with mild cutaneous lesions is that these patients do not know they have the disease; therefore, they are not treated for it, and as a result develop tertiary manifestations.

TABLE I

Type of Pathological Involvement	Stage of Infection	Clinical Prototype.
Meningeal	Usually early, rarely after 4th year	Acute syphilitic meningitis, neuro-recurrence; early asymptomatic neurosyphilis.
Vascular	Rarely early; usually late	Hemiplegia; monoplegia; paraplegia; subarachnoid hemorrhage (cerebral or spinal cord thrombosis hemorrhage).
Mixed meningovascular	Late (3rd to 15th year)	Diffuse "cerebrospinal" syphilis; brain gumma; syphilitic epilepsy; Erb's spinal spastic paraplegia; cranial nerve palsies; basilar meningitis; late asymptomatic neurosyphilis.
Parenchymatous	Late (10th to 25th year)	Tabes dorsalis; general paresis; primary optic atrophy (as isolated lesion).

Moore estimates that 7% of syphilitic patients develop dementia paralytica. This type of neurosyphilis imitates all forms of mental diseases and constitutes about 7% to 10% of the population of the mental hospitals in this country. These figures send out another plea for more spinal fluid examinations of syphilitics as a precaution to offset the full borne symptoms of psychosis later. Many a case of asymptomatic neurosyphilis could be discovered earlier, then proper therapy could be instituted so as to ward off the more destructive types. Paresis has its onset anywhere from five to twenty-five years following the initial infection, it occurs in the relative young and in the middle age, and lately we have seen quite an incidence in patients between sixty to seventy with history of partial treatment, no treatment at all, and in cases discharged from clinics as "cured" of syphilis. It is known that the majority of the cases have their onset during the fourth and fifth decades.

The first changes seem to appear in the sphere of the intellect. Memory alteration is noticed, particularly for recent events, mental faculties are impaired, there is easy distractibility. Neurasthenic symptoms are commonly noted in the prodromal stage. Always suspect early paretic neurosyphilis in an individual who for the first time develops vertigo, headaches, loss of sleep and other neurasthenic symptoms during the fourth and fifth decades of life. The neurological signs may be evident at this time. As a rule the spinal fluid is positive before mental changes appear. But until these changes are revealed one is not justified in speaking of paresis. This type of neurosyphilis presents varied mental pictures: euphoria, grandiosity, manic, depressed and agitated, dementia, and rarely the picture of dementia precox. As the disease progresses, paretic convulsions occur and the picture of deterioration becomes more apparent. The terminal stage comes, complete invalidism sets in, and death is ushered in, usually with intercurrent bronchopneumonia or from a status of paretic convulsive seizures.

Most of the neurological signs encountered in cases of neurosyphilis may be observed in paresis: pupillary changes, irregularity, inequality, Argyll-Robertson pupils (fixed to light but not to accommodation). It is, however, not unusual to find the pupils normal in paresis. Tremor of the facial muscles, lips, of the protruded tongue and of the extended fingers is a very frequent early physical finding. Look for the ironed out faces (vacant expression). Slurring of speech is often found, difficulty lies in pronouncing consonants; test phrases such as "Methodist Episcopal", "ragged rascal", are used to demonstrate

the speech defect. There is often impairment in hand-writing and manual dexterity. Tendon reflexes may be markedly exaggerated, diminished or absent, and at times normal. Convulsive attacks may occur.

The course of paresis has been altered by effective therapy in the last twenty years. Formerly it was almost invariably fatal. From the onset of definite mental symptoms the average span of life was two to two and one-half years. Remissions do occur, but usually are of short duration. The fatal prognosis of this disease has changed markedly since Wagner-Jauregg introduced fever therapy in 1918 and Lorenz introduced tryparsamide in 1923. More favorable promise yet is evident by the introduction of electropyrexia in the last decade. By means of the above therapies improvement can be obtained in 60% to 70% of the cases. Complete remissions occur in 30% to 40%, and in the latter group a return to useful healthy working capacity is achieved. This is a most economical asset in a serious disease that attempts to stricken its host both mentally and physically to complete incapacity.

Early diagnosis in paresis is of extreme importance. If one bears in mind that the clinical manifestation may simulate any form of mental disease, it follows that in every case in which there is a change of personality or the appearance of any psychotic manifestation, paresis must be ruled out. The early diagnosis is the one that counts. The examination of the cerebrospinal fluid is very important, as, in addition to mental symptoms, the final diagnosis of paresis must include the typical cerebrospinal fluid formula positive test for syphilis, increased globulin, increased cells and a paretic curve.

Tabes dorsalis or locomotor ataxia is another chronic, usually progressive form of neurosyphilis. It is primarily an affection of the spinal cord and spinal roots. About 5% of untreated syphilitics develop tabes dorsalis. There is disturbance of coordination, pupillary changes, and root pains of varying distribution. It is thought that the primary locus of the disease is in the posterior roots. In the list of symptoms there is the ataxic gait, absence of reflexes (areflexia), hypotonus, disturbance of sensibility, trophic disorders, lightning pains, and visceral crises. The Argyll-Robertson pupil is the most characteristic sign; another is optic atrophy which is progressive and usually terminates in blindness. Extraocular palsies are found early—usually short in duration. Genital and sphincter changes are common. In the male, impotence is among the first signs. This disease makes itself manifest most commonly after the first decade of the syphilitic infection. The longer the incubation period, the more benign will be the course of tabes. After the fifth decade it is usually mild. Mental disorders do not, as a rule, occur in tabes and it is rare for a well established tabetic to develop paresis. When the paretic mental picture and a tabetic condition coexist the disease is called taboparesis.

Optic atrophy is not only just found as part of the clinical findings of tabes, but it may occur as the only sign of parenchymatous neurosyphilis; moreover, syphilis may cause atrophy of the optic nerve in several other ways. Intraocular inflammatory conditions, gumma, and pressure from syphilitic inflammatory products on the cerebral optic pathways may cause atrophy. On ophthalmoscopic examination the first change to appear in the retina is general pallor of the optic disc, the whole disc gradually becoming a chalk white with sharp defined borders. Tabetic optic atrophy is progressive; the other types respond readily to treatment. Approximately one-half of the cases of early optic atrophy, exclusive of tabetic type, may be arrested by prolonged use of chemotherapy and by electropyrexia.

Acute syphilitic meningomyelitis presents symptoms that are essentially those of transverse myelitis; prodromal symptoms of pain in the back usher in the disease, then there is rapid onset of paralysis or numbness of the extremities. Early anti-luetic treatment may give good results in these cases. Earlier the application of treatment, better the prognosis. Many authorities advocate the administration of anti-luetic treatment to all cases of transverse myelitis because there is a chance of its being of luetic origin. The chronic form is more resistant to treatment. Multiple sclerosis closely simulates the chronic form.

Syphilitic progressive muscular atrophy is a syphilitic endarteritis of branches of the anterior spinal arteries which supply the anterior horn cells. The disease has a subacute onset, and runs a progressive course. The flaccid atrophy is preceded by symptoms of paralysis or weakness. The involvement strikes the shoulder girdle; eventually the forearm and hands show the atrophy, while at times the hands show the atrophy first. The slow progression from the distal portions of the extremities

toward the shoulder girdle as seen in non-specific progressive muscular atrophy is not usually seen in the syphilitic disease. The syphilitic form responds readily to anti-luetic treatment; therefore, it is safe to say that the prognosis is much better than in the non-specific muscular atrophies.

The clinical picture of syphilitic amytrophic lateral sclerosis is in every way similar to that of the non-specific amytrophic lateral sclerosis. The classical signs are weakness and muscular atrophy with fibrillations in the upper extremities and spasticity of the legs with hyperactive reflexes and usually the sign of Babinski. Sensory changes are not present; the changes are produced in the gray matter of the cord and brain. The disease responds to intensive anti-luetic therapy. The non-specific form is progressive and doesn't respond to treatment.

Combined systemic disease is clinically identical with that of pernicious anemia. The differential diagnosis depends upon the finding of a positive Wassermann, Kahn, or Kolmer reaction. The prognosis depends upon the early institution of anti-luetic therapy and also upon the severity of the involvement of the cord.

Syphilitic pacchymeningitis affects the cervical portion of the cord, and resembles syringomyelia. Wasting of the upper limbs occurs with loss of sensation down to a certain level. Pain in the arms is the chief complaint. Response to therapy is not satisfactory.

Gumma is only mentioned as a rarity in the spinal cord. When found in the cerebrum, gummas are usually associated with the meninges. Gumma is the rarest of the neurological findings of syphilis.

Vascular neurosyphilis is an intense panarteritis of the large and medium-sized pial vessels usually at the base of the brain. Blood supply is inadequate and produces perivascular atrophies and softenings. The Wassermann reactions of the blood and spinal fluid may be negative; few lymphocytes are found and usually there is a weakly positive globulin reaction. Vascular accidents on a luetic basis are usually found in young adults under forty-five years of age without renal or cardiac disease. In this age group, syphilis is the most common cause of cerebral vascular disease. In this condition treatment must be used cautiously. The damaged part of the brain will not regain function.

What properly comes under the label of cerebrospinal syphilis is a dispute; symptoms vary. The term meningo-vascular neurosyphilis is more applicable. There are combinations of diffuse cerebral damage with convulsive seizures, and mental changes as also focal softenings are associated with various cranial nerve palsies. Response to therapy is more favorable than in the parenchymatous forms.

Acute syphilitic meningitis is relatively rare.

Asymptomatic neurosyphilis is the condition in which therapy is of greatest usefulness, and in this condition lies the prophylaxis of all clinical neurosyphilis. Spontaneous return to normal of positive cerebrospinal fluid findings is extremely rare, and the prognosis depends a great deal on treatment. Early or late in the disease patients with syphilis may show persistent abnormalities of the cerebrospinal fluid without clinical signs of involvement of the nervous system. These cases represent the precursors of clinical neurosyphilis. A negative spinal fluid in early or late syphilis is a practical guarantee against the development of neurosyphilis. Spinal fluid examination is therefore highly essential towards a successful result of discovering potential neurosyphilis. It has been estimated that some thirty per cent of syphilitic patients without clinical symptoms of neurosyphilis show abnormalities in the cerebrospinal fluid. If allowed to go untreated they will eventually show clinical signs of neurosyphilis. In order to prevent serious neurosyphilis from appearing many years after the patient has considered himself well, it is the duty of the physician to make methodical examination of the cerebrospinal fluid even when the patient is free from nervous involvement. If ordinary anti-luetic regime is not successful, then call on artificial fever and tryparsamide.

Congenital neurosyphilis or juvenile paresis is much more resistant to therapy than the acquired form; juvenile paresis is not a common finding. Many syphilitic children die from a fulminating paresis. The best treatment of congenital neurosyphilis consists in the prevention of the disease by prenatal treatment of the mother.

There are a number of neurological disorders which may be confusing in the diagnosis of neurosyphilis, namely:

General Paresis with:

- Psychoneurosis.
- Cerebral arteriosclerosis.
- Manic depressive psychosis.
- Chronic alcoholism.

Dementia precox.
Encephalitis.
Brain tumor (frontal lobe).
Epilepsy.
Lead encephalopathy.

Tabes Dorsalis with:
Tumors or chronic sclerosis of posterior columns.
Subacute combined sclerosis.
Brain tumor (optic atrophy).
Hypertrophic arthritis (Charcot's joint).
Syringomyelia (Charcot's joint).

Late Meningo-Vascular Neurosyphilis with:
Cerebral arteriosclerosis.
Peripheral neuritis.
Combined sclerosis (pernicious anemia).
Acute or chronic anterior poliomyelitis.
Disseminated sclerosis.
Brain tumor.
Amytrophic lateral sclerosis.
Syringomyelia.
Bell's palsy.
Cord tumor.
Chronic alcoholism.
Cerebral vascular accident.
Paralysis agitans.
Epilepsy.

Acute syphilitic meningitis with:
Tuberculous meningitis.
Brain tumor.
Brain abscess.
Acute infectious meningitis.

Before discussing the prophylaxis of neurosyphilis, the indications for cerebrospinal fluid examination are given below:

1. Spinal puncture should be done about one year after beginning of treatment in early syphilis or near completion of treatment; a highly important procedure in the prophylaxis of possible neurosyphilis.

2. When dealing with a serologic fastness after six months of adequate therapy, suspect neurosyphilis; spinal puncture is indicated.

3. In event of a sero relapse in any case of early syphilis, though a previous spinal fluid examination proved negative, it is imperative to do another examination.

4. Spinal fluid re-examination should be carried out in the presence of persistent serological fastness in early syphilis on probation after treatment.

5. Spinal fluid examination should be done in every case of late syphilis unless some contra-indication exists, such as heart disease with poor prognosis.

6. To manage neurosyphilis, whether it be asymtomatic or symptomatic, it is imperative to do repeated spinal fluid examinations to evaluate the course of therapy.

PROPHYLAXIS OF NEUROSYPHILIS

Neurosyphilis in part is preventable; among recognized syphilitics the 25% expectancy of its development in untreated patients may be reduced by means of routine spinal fluid study, appropriate intensification of treatment in those patients with abnormal fluids in either early or late syphilis, and the use of fever therapy in patients who are serologically resistant to other measures, to a probable 5% or less. The chance of "curing" clinical neurosyphilis once it has developed, or even of obtaining complete symptomatic relief, is not nearly so great as this. The saying "An ounce of prevention is worth a pound of cure", is applicable to neurosyphilis.

There is an unfortunate barrier in many neurosyphilitic patients; it is impossible to apply the prophylactic effect of treatment because the patient is unaware of his infection until neurological symptoms appear. The majority of patients with these grave forms of neurological involvement can give no history of obvious early or late lesions of syphilis and they are totally unaware of the fact that they are infected until disaster overtakes them. It is the infected, but unrecognized syphilitic who is the huge and nearly untouchable reservoir of neurosyphilis. The only solution is the determined effort by physicians to recognize syphilis by means of routine serological tests of patients reporting for any medical complaint, and particularly by means of the examination of patients known to be infected. When the serological test is positive for syphilis a follow-up with a study of the cerebrospinal fluid will reveal the possible liability to neurosyphilis.

The examination of families of neurosyphilitic patients is another essential procedure. There is clinical evidence pointing to a neurotrophic strain of treponema. It was long ago known that several individuals infected from a single source might all develop neurosyphilis. The married partners, husband or wife, of patients with tabes or paresis are found twice as liable to suffer from neurosyphilis as an unselected group of syphilitics.

Examination of the husband or wife of a neurosyphilitic patient should constitute a serological test, a careful physical and neurological examination, and

should there be the slightest suggestion of neurological abnormality, routine study should be made of the cerebrospinal fluid even if the blood was found negative. Moore found in wives of four paretic patients positive spinal fluids when all other examinations revealed nothing. Routine lumbar puncture is not necessary in the children of neurosyphilitic parents unless there is clinical evidence of congenital syphilis or a positive serological test is present.

Prognosis of Syphilis

A short discussion of the prognosis of syphilis will be appropriate before considering that of neurosyphilis. Syphilis ranks with cancer, tuberculosis, and pneumonia as one of the four killing diseases. It imposes an added risk of death as compared with non-syphilitic individuals. Statistics reveal that one of every three syphilitics dies as a direct or indirect cause of this disease. The life expectancy of white males between the ages of thirty and sixty is shortened by 17% and in the negro males of the same age by 30%.

Too much interest is displayed in prognosticating from a serological standpoint. The physician who insists on the serological standpoint in viewing his patient will find himself in serious difficulties.

Central nervous syphilis and cardiovascular type are the major causes of adult deaths if improperly executed from the initial infection. A small amount of treatment in early syphilis is worse than none; it interferes with the body's own defensive mechanism; it often fails to eliminate the infection. The natural specific resistance of the disease is interfered with and therefore the barrier against the more serious complications crumbles, and the spirochaete invader assembles his forces to strike his foe later with full power so as to render his foe weak mentally and physically, hoping to make his attack vulnerable.

The prognosis of neurosyphilis depends largely on the type of involvement present. It is always serious so far as the persistence of disagreeable or even crippling symptoms are concerned. In the case of paresis it constitutes a grave danger of life. Without treatment there are infrequent remissions, 3% to 5% occur, and these are only of short duration. In the large majority there is steady down hill progression with death following the onset of symptoms in an average of two years—exceptionally, five years or longer.

With routine anti-luetic treatment this gloomy outlook is not appreciably bettered. The duration of life is not markedly improved. However, with fever treatment there is a different picture. Complete remissions occur in 30% to 40% of unselected cases, and much better results in carefully chosen cases. Remissions with this non-specific therapy are in terms of years. Many cases show permanent "arrest" or even "cure" of the paretic process. Incomplete remissions of benefit from an institutional standpoint in the transfiguration of bed-ridden "wrecks" to relatively useful hospital inmates are also obtained in a high per cent of cases.

Tryparsamide in Neurosyphilis

This drug has a high arsenic content (25%). There is no evidence of cumulative toxic effect. In man there is a remarkable stimulative effect, evidenced chiefly by a prompt gain in weight and improvement in general appearance and activity. Tryparsamide possesses a high therapeutic tissue penetrability. Lorenz and his associates first used this drug in the treatment of neurosyphilis. The first great effect of the drug is usually a gain in weight and improvement in general physical status of the patient. In paresis remissions occur in about 30% of the patients treated; in tabes and meningo-vascular neurosyphilis, symptomatic improvement is often prompt and satisfying. Except in neurosyphilis, however, the drug is without apparent benefit and should not be used. The serological results from tryparsamide are much less striking than clinical results. There is little or no effect on the serological tests of the blood. Excess cells and protein in the spinal fluid usually disappear promptly. Wassermann or Kolmer and colloidal curves are reduced to negative in a fair proportion of patients with meningo-vascular neurosyphilis, less frequently in tabes and paresis.

In paresis it is an ideal follow-up treatment after fever therapy; always employ first when possible. In other forms of neurosyphilis it is the best custom to try other arsenicals and heavy metals for about six months. If improvement from the preliminary period is not definite, tryparsamide is used in almost all patients.

The average therapeutic maximum dose is three grams intravenously. A minimum course consists of twelve weekly injections. Stokes, Solomon and Moore gave as many as one hundred consecutive

weekly injections as a minimum; it is productive of much better results than a short trial. If clinical improvement is to be expected, it will occur in three or four months, but to obtain lasting serologic improvement in the spinal fluid, years of treatment may be necessary.

The only contra-indication to the drug is the possibility of partial optic atrophy. It may cause nitritoid reactions and gastro-intestinal upsets. There is rare occurrence of convulsions, coma, and visual hallucinations. In most instances, adequate preparation with heavy metals and iodides prevents the occurrence of these reactions. The cause of the increased toxicity of the drug in recent years is unknown. Moore suggests that it may be due to undetected impurities of chemicals used in its manufacture. Visual damage is the main complication to be feared. Out of 2,087 cases analyzed by Sloan and Woods at Johns Hopkins, only 5.12% developed subjective reactions and 3.4% objective reactions. These did not have pre-existing optic nerve damage.

Non-Specific Fever Therapy in Neurosyphilis

Sydenham once said, "Fever is a mighty engine which nature brings into the world for the conquest of her enemies." It has an important role in the therapeutic effect it displays in fighting against the spirochaetal foe that is attempting to destroy the cerebration of the neurosyphilitic. Full credit is due Wagner von Jauregg for the introduction of this effective method into syphilotherapy. After many trials with various inoculations, finally in 1917 he hit upon the idea of inoculating paretic patients with tertian malaria. Fever therapy in neurosyphilis has opened a promising progressive development of the therapeutics of the neurosyphilitic.

There are three main types of fever therapy:

I. Malaria
   1. Tertian
   2. Quartan

II. Mechanical Fever
   1. Air conditioning
   2. Electropyrexia (diathermy, short wave radio)

III. Protein Fever
   1. Typhoid vaccine

Indications for fever therapy:

Paresis
Tabo-paresis
Primary optic atrophy.

Postponement of fever therapy in favor of trial of other methods is to invite progressive mental deterioration, death or blindness. It is always well to remember that paresis and primary optic atrophy are such helpless diseases that it pays to take risks with fever therapy since it has proven of such great merit. In the other forms of neurosyphilis a year at least of preliminary treatment with the trivalent arsenical drugs and heavy metals, then tryparsamide should be tried before fever therapy is advised. I believe that in the case of patients with late syphilis, and especially those with the paretic formula in the cerebrospinal fluid, much will be accomplished with fever combined with chemotherapy plus a subsequent twelve or eighteen months of chemotherapeutic treatment as compared to chemotherapy alone.

In any case the patient's general physical condition should be good. Advanced age, marked malnutrition, active pulmonary tuberculosis, obesity, and aortic aneurysm are temporary or permanent contra-indications. Syphilitic aortitis is not a contra-indication even in the presence of a compensated aortic regurgitation, though, such patients require special cardiac supervision during treatment. The relative safety of electropyrexia over malaria has proved itself safe even in some of the above cases. Malaria is only for the young and strong.

At our hospital inoculation malaria, the Kettering hypertherm, and the inductotherm, are used to induce fever in neurosyphilis. The procedure of each type of therapy will be given, then finally the results of a comparative study of the therapeutic effects of each method will be discussed.

Fever by Induced Malaria

Tertian malaria is the infection of choice in this form of fever therapy. Its clinical manifestations are less severe and more controllable with quinine. Our institution, being for colored patients, quartan type is used, since the colored race is immune to the tertian type. The direct patient to patient transfer is used in our inoculations. I find that about 7% to 10% of our patients are refractory to the quartan type of infection. Several observers (Branche, Knoll and Fong) have reported satisfactory results with the quartan malaria, even in white patients. Mays, Oden, and Cox think that in the treatment of general paresis it is superior to tertian malaria.

The technique of inoculation:

Although other routes of inoculation can be used, the intravenous route is used. The amount of inoculum used is 10 c.c. of whole blood from a patient running a course of inoculation malaria. Since the donor and recipient are usually nearby, whole blood minus citrate is used. At times it is necessary to use citrate, 1 c.c. of 2.5% for each 10 c.c. of blood that is employed; this does not impair the vitality of the plasmodium. If for any reason the citrated blood is not to be used immediately, it is suitable for inoculation within a twelve to forty-eight hour period if kept in an ice box, cool room, or incubator.

Incubation period of tertian malaria is one to fourteen days (average six days); quartan ten to sixty days (average twenty-one days). During the incubation period patient is allowed to be ambulatory; temperature is checked every four hours while awake. When temperature reaches 101 degrees Fahrenheit, the patient is ordered to bed for further therapy. Vitamins plus iron are given orally three times a day from the day the patient is inoculated.

Routine while running malaria:

1. Complete bed rest.
2. T. P. R. every three hours while awake.
3. For temperature 106 degrees, tepid sponges.
4. Blood pressure checked morning and evening.
5. Close observation made for possible complications.
6. Analgesics and sedatives are given p.r.n. for discomfort.
7. Sodium chloride four grams daily is given to replace lost chlorides from diaphoresis.
8. Urine is examined every three days.
9. Hemoglobin and red blood count determination is made every fifth day.
10. N.P.N. determination every five to seven days.
11. Fluids are given freely.
12. Thiamine hydrochloride and ferrous sulphate three times a day.

Patient is allowed to run ten to twelve paroxysms. The malaria is then terminated by giving quinine, grains ten, three times a day for a week; then grains five for another ten days. Bed rest is prolonged ten days after the last febrile paroxysm. Physical activity is gradually resumed over a three or four week period.

Follow up with chemotherapy: Five days after the last paroxysm the patient is started on chemotherapy weekly, usually started on tryparsamide one or two grams dosage, or mapharsen .06 gram. Eleven treatments are given in each course, alternating between tryparsamide, bismuth and mapharsen with no interruption of therapy. The majority of our patients receive saturated potassium iodide orally ten to fifteen drops, three times a day after meals daily for six months. Treatment is continued from three to five years. Blood and spinal fluid checks are made every six months.

There have been numerous hypotheses presented as to the *modus operandi* of induced malaria. It appears that, since the introduction of artificial fever, comparisons have shown that malaria's therapeutic effectiveness is more or less a foreign protein reaction and it is the fever induction that gives the results rather than the specificity of the malaria.

Artificial Fever Therapy

In 1929, Neymann and Osborne introduced artificial fever therapy with high frequency currents—the beginning of another era in the treatment of neurosyphilis, the Artificial Fever Period. In the treatment of neurosyphilis, we have had three periods: 1. Chemotherapy, 2. Period of Malarial Therapy, and 3. Period of Artificial Fever Therapy.

Electropyrexia: Blood chlorides and N.P.N. are not disturbed to a point of danger by this method of therapy. Precautions are taken by giving sufficient sodium chloride, with water before, during, and after the fever treatment.

Technic of artificial fever treatment at our hospital:

1. All patients receive grs. 1ss of nicotinic acid daily throughout the entire course of twelve weeks of therapy.
2. The fever therapy consists of five hour sessions of fever weekly, maximum temperature 104 to 105 degrees, maintained at the maximum temperature two and one-half to three hours.
3. Physical check-up is made twelve hours before therapy. Bismuth 2 c.c. is given intramuscularly, if on combined chemotherapy, prior to each fever session.
4. Urinalysis check before therapy.
5. Calcium phosphate grs. xv, three times one day orally, forty-eight hours before each treatment.
6. 1000 c.c. of 5% glucose in saline with 1 c.c. thiamine hydrochloride is given intravenously prior to going for electropyrexia.

7. S.S. enema night before treatment and morning of treatment.

8. Urinary bladder is checked before patient leaves ward.

9. Disturbed patients receive codeine grs. ss hypodermically before therapy.

10. After the initial hour of the therapy the patient is encouraged to drink fruit juices and water, chilled, but not iced.

11. If patient becomes too restless, codeine grs. ¼ or grs. ss is given, if necessary.

12. If combined chemotherapy is used, .06 grams mapharsen, or one or two grams of tryparsamide, is given intravenously when fever reaches the vicinity of 104 degrees, feeling that the permeability of the drug is greater at the maximum temperature, and thus more efficacious, and the relative toxicity is diminished or minimized.

13. In the last half hour of the therapy 1000 c.c. of saline is given intravenously with 10 c.c. of calcium gluconate; the latter is given to avoid any tetany, and the former as a measure to replace salt lost by diaphoresis during the therapy.

14. Patient is watched carefully. Pulse and respiration checked every half hour.

The patient is removed from the fever cabinet for any of the following reasons:

1. If he becomes unconscious at any phase.

2. If there is a sudden drop of blood pressure and if there are symptoms warning of possible cardio-vascular collapse.

3. Cramps of various muscles, not seen by me, prevented by proper chloride intake prior to treatment and before completion of treatment.

4. Pulmonary edema—rare. Treatment, venesection 500 c.c. blood.

5. Cerebral edema is another rarity; treatment, spinal puncture.

A three year observation has been made of 190 cases of paresis treated at our hospital with inoculation malaria and artificial fever therapy. The majority of cases treated presented intermediate signs and symptoms; only forty cases presented severe signs and symptoms; of this number ten were treated with therapeutic malaria; mild cases were in the minority, composing only twenty-five patients. In all cases showing remission, the blood serology and paretic formula were definitely reduced; complete reversal was greater in those cases treated with artificial fever concomitant with chemotherapy. Intensive chemotherapy, subsequent to fever therapy, is an essential requirement for sustained optimum results. The average age of patients treated was 40.1 years. The table below gives the comparative results of the two forms of fever therapy.

TABLE II

Dementia Paralytica: Types of Treatment and Clinical Results—Two-Year Treatment Observation

	Artificial Fever		Theraputic Malaria	
Clinical Status	No. of Cases	Percentage Approx.	No. of Cases	Percentage Approx.
Remission	65	64%	30	33%
Improved	21	20%	13	15%
Remission and improved	86	84%	43	48%
Unimproved	13	13%	25	30%
Died within 3 months of treatment	3	3%	20	22%
Total	102	100%	88	100%

Remission: In this class I have included all cases considered as socially recovered, able to function mentally and physically in society and able to return to work.

Improved: In this class the patient's mental and physical status is so benefited that they show good adaptation to the hospital environment; these are allowed ground parole and are able to work under supervision on the hospital grounds.

Unimproved: Under this class are classified those patients who remained stationary for a long time following therapy, and subsequent chemotherapy, but have become less burdensome; at least the stormy phase has subsided.

SUMMARY AND CONCLUSIONS

1. The pathogenesis, symptoms, prophylaxis, prognosis, and treatment of the various types of neurosyphilis have been presented with a comparative observation of malarial and artificial fever therapy.

2. Neurosyphilis is a serious complication of syphilis. It accounts for approximately 45% of the deaths directly due to syphilis. The foundation for all types of neurosyphilis is laid down during the early months of the infection, at the time of generalization of the causative organism.

3. Many a syphilitic could be spared mental in-

validism through a study of the cerebrospinal fluid at more frequent intervals during the course of his disease.

4. A positive blood test should always be followed by a study of the cerebrospinal fluid.

5. Paresis, taboparesis and primary optic atrophy are imperative indications for the use of fever. In other forms of neurosyphilis, reserve it to be used only if chemotherapy fails to give improvement or prolonged sero resistance exists.

6. The persistent claim that the malaria plasmodium exerts a specific beneficial influence in cases of neurosyphilis, apart from the production of fever, has little justification in the light of development of the past decade.

7. Artificial fever therapy is the treatment of choice because: (a) The patients tolerate artificial fever therapy more readily; (b) Patients can be treated on an ambulatory basis; (c) Treatment complications are minimized; (d) The risks of inoculating an already ill patient with another infectious disease (malaria) are eliminated.

8. Artificial fever therapy combined with chemotherapy is the treatment of choice. Observation with mapharsen offers promising results.

9. The patient receiving combined artificial fever therapy with chemotherapy shows increasing physical restoration in contrast to the malarial patient whose body resources are torn down by the added disease.

10. Lastly, the best treatment of neurosyphilis, after all, is its prevention through the adequate treatment of early syphilis. Unless the physician fails to evaluate the possibility of this complication, it is certain that the manifold problems of neurosyphilis will continue to arise.

BIBLIOGRAPHY

Tayloe, Gordon B.: Fever Therapy, *Annals of Internal Medicine,* **18**:968-972, June, 1943.

Moore, Joseph Earl: The Modern Treatment of Syphilis, 2nd Ed., 2nd printing, 356-462, 1943.

Blumer, Geo., and Lane, C. Guy: Dermatology and Syphilology, **10**.

Simpson, Walter M., Kendell, H. Worley, and Rose, Donald L.: Treatment of Syphilis, supplement No. 16. U.S.P.H. Service, 43-48, 1942.

Kendell, H. W., Simpson, Wm., and Rose, D. L.: Artificial Fever Therapy, Chemotherapy—Summary of 10 Years Experience, *Ohio State Medical Journal* **38**: 909-918, October, 1942.

Lorenz, W. F.: The Therapeutic Use of Tryparsamide in Neurosyphilis, *J.A.M.A.* **80**:1497, 1923.

Bennett, A. E.: Present Status of Fever Therapy, *Nebraska Medical Journal* **27**:317-320, September, 1942.

Symposium on Neurosyphilis, *Journal Nervous and Mental Diseases* **80**:320, 1934.

Therapeutic Quartan Malaria in the Therapy of Neurosyphilis among Negroes, *American Journal Syphilis, Gonor., and Ven. Dis.* **24**:133, 1940.

The Practitioners' Library of Medicine and Surgery, 971, 1936.

Epstein: Pathogenesis of Syphilitic Atrophy, *American Journal of Pathology* **16**:157, 1940.

Stomach Ulcer Patients Need Food at Night to Neutralize Acid.

Patients with ulcer of the stomach need to be fed at night to neutralize the acid present which retards healing, according to a report in the February 2 issue of *The Journal of the American Medical Association.*

David J. Sandweiss, M.D., from Detroit; Major Marcus H. Sugarman and Captain Harold M. Podolsky, of the Medical Corps, Army of the United States, and M. H. F. Friedman, Ph.D., of Philadelphia, studied gastric secretion in 38 normal persons and 29 ulcer patients at the Harper Hospital and the North End Community Fund Clinic, Detroit, Mich.

The authors conclude that although the ulcer patients have no greater volume of gastric juice at night than normal persons, the evidence indicates that they retain more of the juice and acid in their stomachs. Therefore, in order to prevent the acid from irritating the ulcer at night, feeding is essential.

THE COMMON ANEMIAS—INCIDENCE, CAUSE AND TREATMENT*

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Although it has been firmly established that there are a number of disease conditions characterized principally by anemia, which are distinct as to causation, gravity and treatment, there is much evidence that many physicians still treat all in the same way. Medicine vendors encourage the public to take liver, iron and vitamins in any case of lowered hemoglobin, actual or supposed The management of the anemia patient would be less haphazard if it were better realized that proper treatment depends upon an accurate diagnosis.

The purpose of this paper is (1) to evaluate the laboratory method accepted by hematologists of classifying the anemias (2) to discuss in some detail pernicious and iron-deficiency anemia, syndromes of macrocytic and hypochromic microcytic anemia, respectively; and (3) to emphasize the importance of diagnosis as a requisite to adequate therapy.

Addison,[1] in 1855, characterized what is now believed to have been pernicious anemia as a disorder which "makes its approach in so slow and insidious a manner that the patient can hardly fix a date to the earliest feeling of that languor which is shortly to become so extreme". Its relief remained a baffling problem.

The information concerning the anemias, discovered within the past two decades by the brilliant study of Minot and Murphy,[2] published in 1926 under the title "The Treatment of Pernicious Anemia by a Special Diet", marked the beginning of an important epoch in modern medicine. These investigators described the syndrome of the disorder and demonstrated for the first time its specific therapy. As a result of their work, doctors everywhere began to treat the disease successfully with the anti-anemic principle found in liver—first using liver itself, later the refined extract, administered either orally or parenterally.

This discovery preceded by six years that of the proper therapy of the more frequently encountered disorder—iron deficiency anemia. Doctors had long known the virtue of Blaud's iron pills; few, however, comprehended that iron is the remedy for a specific type of anemia. In 1932, Minot and Heath[3] published their paper entitled, "The Response of the Reticulocytes to Iron", describing the reticulocyte and red-cell response to iron therapy in iron-deficiency anemia as in many respects similar to their response to the anti-anemic principle found in liver in cases of pernicious anemia.

As a result of these two studies, great progress was made in the proper classification of these blood disorders, etiologically and clinically, and in their appropriate treatment. In recent years hematologists have endeavored to label anemias according to size of the red corpuscles, variations in their number per c. mm., quantity of hemoglobin, and particularly the quantity of packed red cells per 1000 c.c. of blood. Wintrobe[4] and Dameshek,[5] in different laboratories, showed these variations fall into four morphological groups of cells: macrocytic, cells larger than normal; normocytic, cells of normal size and hemoglobin content; microcytic, cells smaller than normal; hypochromic-microcytic, cells smaller than normal and of reduced hemoglobin content.

Manifestly, to classify an anemia morphologically does not lessen the obligation to consider its type in respect to etiology. It is rather a valuable criterion in determining it. For example, the signs and symptoms of pernicious anemia are chronicity, achylia gastrica and certain gastro-intestinal and neurological disturbances. In such a case, a routine laboratory examination will reveal a high hemoglobin content as compared with the number of red cells—a high color index. Ordinarily these findings are all that is needed to make the diagnosis. However, for confirmation, if the volume of packed red cells per 1000 c.c. of blood (as determined by the hematocrit) be divided by the red cell count in millions per c. mm., the mean corpuscular volume will be determined. In cases of pernicious anemia this is 94 cubic microns and higher, depending on the severity of the case. These macrocytic cells are diagnostic of pernicious anemia and accordingly their presence makes reasonably certain the clinical diagnosis.

A determination of the mean corpuscular volume has more value in the diagnosis of the most frequently encountered hypochromic microcytic anemia. This type of anemia varies in degree and is often

*Read at The Richmond Academy of Medicine. April 24, 1945.

very difficult to diagnose clinically. Its symptoms are vague, multiple and simulate those of other deficiency disease conditions. A given case may be labeled psychoneurotic or neurasthenic. Wintrobe[4] states that curettage, hysterectomy, exploratory laparotomy and splenectomy have been performed in certain cases, with no improvement, and cure was accomplished later by iron therapy alone. Only recently, I treated an elderly woman who had been digitalized because of weakness and dyspnea on exertion. Except for digitalis effect the electrocardiogram was normal and a blood examination revealed a high degree of hypochromic, microcytic anemia. Digitalis was discontinued and iron therapy instituted with marked improvement in the patient. The morphological examination, therefore, is an important criteria in diagnosing these cases. A typical example often seen is the following: The red blood cell count is nearly normal (in a given case, say 4,000,000) while the hemoglobin is low—findings which are sometimes dismissed as error in the hemaglobin determination. However, if a hematocrit determination be done, and the same formula be used as in the case of pernicious anemia, the mean corpuscular volume will be found to be low—in keeping with the hemaglobin reading of 80 cubic microns and lower, the range for hypochromic anemia. This finding of low mean corpuscular volume is characteristic of this type of anemia and so fixes the diagnosis.

The morphological classification permits the diagnosis of the other two types of anemia also, namely, normocytic, in which the red cells are normal in size and hemoglobin content, and the simple microcytic in which a majority of the red cells are smaller than normal. There are many syndromes of normocytic anemia; however, it is not the purpose of this paper to discuss them. The typical type follows sudden blood loss, the treatment of which is transfusions. The simple microcytic anemia is rare and need only be mentioned here.

Pernicious anemia constitutes the most familiar syndrome of macrocytic anemia. Some of the other syndromes are sprue, idiopathic steatorrhea, cases of intestinal stricture and resection, and rare cases of carcinoma of the stomach. I have observed the clinical syndrome of sprue and pernicious anemia, and shall describe the latter at this point.

It is not difficult to recognize a classical case of pernicious anemia. The skin has an unmistakable pale-yellow tint, the flesh is flabby, the tongue sore. The symptoms are extreme weakness, anorexia, bouts of diarrhea, tingling sensations and numbness in the lower extremities. Achlorhydria is so much the rule that the finding of free hydrochloric acid in the gastric secretions renders the diagnosis doubtful, although numerous cases[6] unassociated with achlorhydria have been reported. A blood examination will reveal anemia, its degree depending on the stage of the disease, and may be as low as a million red cells per c. mm. The color index is always high, the mean corpuscular volume generally large, although cases have been reported in which there was no increase in mean corpuscular volume above normal.

The treatment is the anti-anemic principle found chiefly in liver. Desiccated[7] hogs stomach is also used effectively in the disease. Extracts for parenteral use, however, have been made only from liver. Liver extract administered intramuscularly is the treatment of choice, one c.c. of the product of several pharmaceutical firms now being equivalent to fifteen units. The amount required in the early stage of the disease manifestly varies with the severity of the particular case, requiring daily, or e.o.d., injections in some instances. The maintenance dose required after the red cell count reaches five million is about fifteen units weekly, and continuous treatment is necessary. Neither iron therapy nor hydrochloric acid is necessary in the treatment.

The following case is presented:

A white man, aged 55, was first seen July 18, 1931. The chief complaint was extreme weakness. He gave the history of having had a similar attack two years before when he became jaundiced and had diarrhea with mucus. At that time, his ankles swelled and he had dyspnea on slight exertion. He consulted several physicians and at length improved in well-being though he never completely recovered.

The present illness had begun insidiously several months before and increased in severity until he was compelled to give up all work. Except for the illness two years before, he had been well and healthy all of his life. The family history was non-contributory.

The patient was extremely pale and dyspneic, barely able to walk, with pulse of 90, respiration of 20. The skin had a distinct lemon-yellow tint, the buccal mucosa was extremely pale, the tongue red with atrophied papillae. There was some cardiac hypertrophy and a systolic murmur and an occasional extrasystole. The abdomen was soft and

flabby. Neither the liver nor spleen could be palpated. The extremities presented no abnormality and all reflexes were physiological. Two gastric analyses on different days revealed free hydrochloric acid following an alcohol meal.

The urine and Wassermann tests were negative. The initial blood examination showed 1,000,000 red blood cells, hemoglobin 30%, color index 1.5, white blood count 4,000—55% neutrophils, 3% monocytes, one each of eosinophils and basophils and 40% lymphocytes. A smear showed a majority of the red cells macrocytes, a pronounced anisocytosis, poikylocytosis, numerous normoblasts, and an occasional megaloblast and reticulocyte.

Treatment consisted of an ounce of Valentine's Liver Extract No. 29, t.i.d., in milk or tomtato juice. The response was spectacular, as evidenced by the improvement of his symptoms and the following counts:

Day	RBC	HBG. %	Color Index	Reticulocytes %
1st	1,000,000	30	1.5	2
3rd	1,100,000	32	1.4	2
7th	1,600,000	43	1.3	7
14th	2,400,000	58	1.2	6
21st	2,800,000	60	1.1	4
28th	3,600,000	72	1.0	0
35th	3,800,000	75	1.0	0
60th	4,200,000	80	.9	0
Final	4,500,000	88	.9	0

When seen twelve years later he gave the following remarkable history: He had had five hospital admissions, the first in 1932, six months after I had treated him, again in 1934, 1938, 1940 and 1943, the first four of which were for treatment of his anemia. According to the hospital records the blood examinations and symptoms were those found in pernicious anemia and the case was so diagnosed each time. Singularly enough, free hydrochloric acid was always found in the gastric contents and neurological examinations were negative.

He entered a local hospital the last time because of hemoptysis of undetermined origin. Objecting to a bronchoscopic examination, he signed a release and returned home.

When examined he was ambulatory and his anemia under control. Except for hemoptysis on several occasions, which an x-ray examination later indicated was pulmonary in origin, the course of illness followed the usual pattern.

He had been taking neobovinine, a preparation containing liver, iron and beef extract, the length of time not being clear. At length, however, he developed gastric discomfort, a drop in the red cell count and undue weakness. It was thereupon deemed wise to administer liver extract intramuscularly, and, accordingly, he was given 30 units weekly for several months, and then the interval extended to two weeks.

Several analyses of gastric contents revealed free hydrochloric acid, and all neurological findings have been physiological.

At present he is comfortable, the blood count, hemoglobin and mean corpuscular volume are all within normal limits, and he leads a normal life.

Iron deficiency is the chief cause of hypochromic microcytic anemia and this lack may be due to many factors. Wintrobe lists the following as the most important: an inadequate diet, defective absorption, deficiency conditions such as pellagra and mild cases of hypothyroidism, continued blood loss and unusual demands for iron due to growth and repeated pregnancies.

The syndrome is characteristic. The signs are pallor, dry skin, papillary atrophy of the tongue and concavity of the nails. The chief symptom is chronic fatigue without remissions. A greatly reduced hemoglobin content is the distinguishing blood characteristic. A smear will show anisocytosis and poikilocytosis, and central pallor of the red cells. The condition affects probably a majority of women past forty years of age who have menstrual disturbances. In 140 such cases with a basal metabolic rate greater than minus 15, I found that 90 per cent had anemia varying from the normocytic to the hypochromic, microcytic type. In a recent study of 24 cases of various types of cancer, the diagnosis was indicated by the presence of anemia in several instances involving the gastro-intestinal tract. It is notoriously found in women whose pregnancies follow in close succession. In one family of 17 children, I found the condition to exist in varying degree in the majority.

The following case is presented:

A white woman, aged 55, complained of anorexia, weakness and fatigue. The onset of symptoms was insidious, and they had increased in severity until she was barely able to perform her usual household duties. The family history was non-contributory. The past history, however, was significant in that she had had several miscarriages and 13 hospital admissions.

She appeared much older than her stated age. She had a waxy pallor. Her hair was white, her skin dry, her finger-nails flat and brittle. The systolic blood pressure was 110, the diastolic 60, a b.m.r. test was -29 and all neurological tests were physiological. The urine and blood Wassermann tests were negative. The initial blood examination revealed 4,000,000 rbc., a hbg. of 60% (color index of .75), a mean corpuscular volume of 65, and a wbc. of 6,000. The blood smear showed distinct pallor of the red cells.

Treatment consisted of 3 grs. of ferrous sulfate t.i.d., vitamin B_1 and thyroid extract grs. 2 daily, later increased to 3 grs. daily.

Improvement was marked and sustained as shown by the following blood counts:

DAY	RBC	HBG. %	C.I.	HEMATOCRIT	M.C.V.
1st	4,000,000	60	.75	30 mm.	75
3rd	4,000,000	62	.77		
31st	4,100,000	70	.85		
6 mos.	4,200,000	78	.95		
1 year	4,300,000	85	.98	38 mm.	81

The treatment of hypochromic, microcytic anemia is easily administered and consists chiefly of ferrous sulfate. The response to this therapy is so ready that it is indeed regarded as specific. In few diseases is the effect of treatment so dramatic. Obviously an iron-producing diet is indicated. In certain instances vitamin B complex is of value. However, it should be emphasized that liver, except as a part of the diet, is of no value—and drug-store liver is expensive.

From a great bulk of evidence it is believed that much of the treatment of anemia is haphazard. We face an anomalous situation in that, while iron is specific and liver is of no value, frequently the two are prescribed in combination. Numerous pharmaceutical houses prepare liver and iron in various proportions in capsule form for the treatment of any and all anemias. A sample taken from my drawer at random recommended for secondary anemia is the following: liver concentrate, iron and vitamins. These retail for three cents each and three to six are advised daily. Any one of you can name a half-dozen such preparations which detail men told you were of great value, while informed hematologists maintain that the liver, the most expensive ingredient in such capsules, is of no value.

Another practice, which should be condemned, is the indiscriminate use of what are vulgarly called liver "shots". In many instances these injections are given when no anemia of any kind is a feature of the case. Dr. William Dameshek thinks the Talquist method of determining the presence of anemia responsible for many errors and calls such cases Talquist anemia. In a recent paper he comments as follows:[5] "A curious commentary on this matter is that practically every patient with anemia whom I have seen in the past few years had had numerous injections of liver extract except those who have had pernicious anemia". Numerous patients have informed me that they were taking liver "shots" and examination has revealed only moderate, if any, anemia. Recently a soldier's wife requested that I give her liver injections. She stated that her physician had given her these since the birth of her six-month-old baby and had advised her to continue taking them. A laboratory examination indicated that her blood was normal.

Dr. Maxwell Wintrobe emphasizes the importance of a correct diagnosis in every case of anemia before any treatment is instituted.

In concluding, I can do no better than to quote from his excellent text—*Clinical Hematology*. "In recent years there has been a vast improvement in the treatment of anemia . . . . Yet it is by no means unusual today to encounter cases of anemia which have been treated inefficiently, inadequately and incorrectly . . . . Several reasons can be offered to explain these inadequacies The first is failure to understand the importance of accurate diagnosis . . . The diagnosis should and almost always can be made before the use of therapeutic agents has obscured the whole clinical picture . . . . A deplorable factor is the promotion of 'shotgun' remedies by pharmaceutical houses of good repute . . . . Mixtures with attractive or impressive names and containing iron, copper, manganese, and all the vitamins known and hypothetical, are recommended by 'detail men' with imposing lists of references. The result is great waste of time and money for the patient and discredit to the physician."

SUMMARY

Reference is made to the important studies of Minot and Murphy, and Minot and Heath, respectively, which marked the beginning of a better understanding of pernicious anemia and of iron-deficiency anemia. Also, the laboratory method ac-

cepted by hematologists of classifynig the four types of anemia is evaluated.

The clinical syndromes of pernicious and iron-deficiency anemia, types of macrocytic and microcytic hypochromic, respectively, are described in some detail, and a case history of each is presented in brief outline. Also the treatment of both types is described and their specificity is emphasized.

Finally, the importance of an early diagnosis in every case is stressed.

REFERENCES

1. Addison, Thomas: The Published Writings of the late Thomas Addison—1868. p. 212.
2. Minot, G. R., and Murphy, W. P.: Treatment of Pernicious Anemia by a Special Diet, *Jour. Am. Med. Assn.* **87**:470, 1926.
3. Minot, G. R., and Heath, C. W.: The Response of the Reticulocytes to Iron, *Am. Jour. Med. Sci.* **183**: 110, 1932.
4. Wintrobe, M. M.: Anemia: Classification and Treatment on the Basis of Differences in the Average Volume and Hemoglobin Content of the Red Corpuscles, *Arch. Int. Med.*, **54**:256, 1934.
Wintrobe, M. M.: Clinical Hematology: p. 222, and p. 432.
5. Dameshek, William: Hematology, *New Eng. Jour. Med.* **232**: No. 9 (March 1, 1945).
6. Finney. J. Owen: Pernicious Anemia Unassociated with Achlorhydria; Case Report, *Annals of Internal Med* **12**:1521, 1938-39.
7. Sturgis, C. C., and Isaac, R.: Treatment of Pernicious Anemia with Desiccated Defatted Stomach, *Am. Jour. Med. Sci.* **180**:597, 1930.

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Serious Heart Inflammation Treated Successfully with Penicillin.

Twenty patients with subacute bacterial endocarditis, a disease involving inflammation of the lining membrane of the heart and previously considered fatal, were treated with penicillin last year at the University of Pennsylvania Hospital, with the result that 16 had definite subsidence of their infection. Of these 12 are still alive, 8 having died of other complications according to a report in the November 24 issue of *The Journal of the American Medical Association.*

Harrison F. Flippin, M.D., Robert L. Mayock, M.D., Franklin D. Murphy, M.D., and Charles C. Wolferth, M.D., with the technical assistance of Marjorie Wiley, Philadelphia, wrote that "we employed 300,000 units of penicillin a day for fourteen days as the initial course. This appeared adequate in 14 of the 20 cases. However, in view of subsequent experience with 16 additional cases of the disease, not included in this report, we believe that all patients with subacute bacterial endocarditis should receive at least 500,000 units a day for at least five weeks."

The penicillin was injected into the veins of the patients, but, according to the authors, there is no reason to believe this method is superior to injections into the muscles.

Subacute bacterial endocarditis usually attacks valves of the heart that are already damaged. The germ which is responsible for the condition in 90 to 95 per cent of cases is the Streptococcus viridans, while the gonococcus and the influenza bacillus are the causes in 5 to 10 per cent.

Since infection is so dangerous in this disease, the authors urge "as a precaution against reinfection, a careful search for possible foci of infection, such as infected teeth and tonsils, should be made."

Although only 12 patients lived, the authors wrote that "of the 8 who did not survive 4 were completely free of active infection and died as a result of heart disease. Three patients in this group failed to respond to therapy, and the eighth died soon after treatment was completed as a result of an acute pulmonary embolus (closure of a lung artery by a clot carried by the blood)."

CHRONIC SUBDURAL HEMATOMA CLINICAL COURSE SIMULATING RUPTURED INTRACRANIAL ARTERIAL ANEURYSM—CASE REPORT

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If it can be said that the classic picture of any disease entity is the clinical exception rather than the rule, then this is particularly true of chronic subdural hematoma. Davis[1] states: "There is no other intracranial lesion so difficult to diagnose accurately upon the subjective and objective symptoms alone, and often a hematoma may be encountered when it is least expected".

In most cases of chronic subdural hematoma, however, it is the vague history and findings which leads to diagnostic difficulties, striking evidence of neurological disturbance such as paresis, aphasia, diminution of visual acuity, and diplopia are infrequent and often transitory. Convulsions, focal or generalized, are quite rare.[2] Headache, drowsiness, mental confusion, and nausea and vomiting are the most common symptoms; but these are characteristically fluctuating to the point of complete remissions and exacerbations, often leading to a diagnosis of psychoneurosis or other psychogenic disorder, where vague complaints and mental confusion without objective neurological phenomena form the clinical picture.

Herein is presented a case with an unusual clinical course characterized by abrupt onset, fulminating progression of symptoms of an acute intracranial disorder accurately simulating a ruptured intracranial aneurysm, and proved by pneumoencephalography and operation to be a chronic subdural hematoma.

CASE REPORT

John O., age 17, admitted to St. Vincent's Hospital, September 10, 1944.

Chief Complaint: Headache, diplopia and blindness in right eye.

Present Illness: Sudden onset of severe splitting headache, non-localized, two days ago while swimming. Patient came out of water feeling sick and started vomiting about five minutes after onset of headache. While being taken home patient states he could not see at all out of the right eye. Patient does not recall anything else until awakening in hospital at Vero Beach next morning (yesterday). Still has headache now (September 10, 1944) mostly behind eyes. Vomited some yesterday but not today. Has had diplopia today. No further symptoms and patient had been in good health recently. Mother states patient became unconscious and was apparently delirious after being put to bed at home and was taken to the hospital *via* ambulance. Dr. Lyerly was told in phone conversation that patient had convulsions during hospital stay.

Past History: Patient had the usual childhood diseases without sequelae. Had chronic osteomyelitis of right knee following pneumonia five years ago, and has had other foci with activity as recent as three months ago.

Family History: No family or hereditary disease history.

Examination: Patient is a well developed and nourished 17-year-old white male in moderately severe distress with headache. He is conscious, alert, cooperative and oriented to time and place.

Head: no localized tenderness nor deformity.

Neck: no pain nor stiffness.

Eye, Ear, Nose and Throat: pupils equal and react to light and accommodation but rather small. Extraocular movements seem intact but patient has diplopia in all directions with one image higher than the other. Vision grossly normal bilaterally at this time.

Chest: slight pigeon breast deformity. Lungs clear to auscultation. Heart sounds of good quality, without rubs. Grade 1 systolic bruit over entire precordium. Rate 60. Rhythm regular. Blood pressure 150/70.

Genito-urinary: normal for 17 year old.

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Rectal: not done.

Extremities: scars of chronic "osteo" and drainage operations, etc., over right knee (large defect), left ankle and on back but no evidence of activity. Ankylosis of right knee. The patient is right-handed. There is a slight right hemiparesis, with questionable right facial weakness. Cerebrum and cerebellum otherwise essentially negative. Cranial nerves essentially negative except for probable trochlear nerve palsy. Tendon jerks equal and plus. (Unable to take right knee jerk due to ankylosis). May be right Babinski sign. Right great toe is ankylosed. Abdominal reflex definitely less on left.

Impression: Intracranial hemorrhage, probably "berry" aneurysm on left, anteriorly.

Laboratory Data: September 10, 1944.

Urinalysis: within normal limits.

Blood: red blood count 4,100,000, white blood count 11,650. Hemoglobin 12.5 gm. or 81 per cent. Neut. 74, stabs 9, seg. 65, lymp. 26. Coagulation time 4 minutes.

Spinal fluid: September 11, 1944—cell count 8, protein 40 mg. per cent, Kahn negative.

September 28, 1944—Spinal fluid: cell count 1, protein 20 mg. per cent, Kahn negative.

Urinalysis: within normal limits.

White blood count—September 22, 1944—leukocytes 11,400, neutrophiles 63.0, lymphocytes 31.0, monocytes 1.0, eosiniophiles 5.0, stabs 2, seg. 61, Kahn negative.

X-Rays: Flat films of skull revealed no pathology.

Encephalogram: September 28, 1944—showed fluid clear and colorless, initial pressure lying down was 250 mm. of water. A total of 75 cc. represented complete replacement of fluid by gas. Dictated by Dr. Beals (Roentgenologist) 9/28/44: "Examination of the encephalogram made in this case shows rather definitely that there is no dilatation of the lateral cerebral ventricles; neither is there any significant distortion of their outlines, except that perhaps the lateral wall of the right ventricle may be slightly more convex than normal. However, if anything, the right lateral ventricle is slightly larger than the left. I believe the third ventricle is not clearly demonstrated in any of the films. However, all five saggital views give me the distinct impression that the interventricular septum is displaced away from the right and towards the left side of the skull. There is also a definite depression of the roof of the superior angle of the right lateral ventricle.

"I believe these films show that there is a space encroaching lesion on the right side of the cranial cavity. The distribution of air in the subarachnoid spaces is not of sufficient amount, as demonstrated by the saggital views, to indicate whether the lesion is central. Because there is not apparently less subarachnoid air on the left side I do not feel that this deflection of interventricular septum is due to decrease of normal volume on the left; besides the depression of the roof and outer angle of the right ventricle is in favor of a space occupying lesion on that side.

"It may be noteworthy that the mastoid cells and shadows of the petrous temporal bone are normal."

Operation: (9/30/44) Skin prepared with tincture of mercresin, straight incision made vertically above the ear, about 1 inch. Drill hole put in bone, opening enlarged to about 1 inch in diameter. Dura was opened, and there was discoloration showing through dura. Dura opened widely, and blackish membrane was then ruptured and black thick blood of a subdural hematoma escaped. A catheter was passed in various directions over the right cerebral cortex and much black subdural fluid irrigated. Irrigation of Ringer's solution done through catheter until fluid returned clear. One rubber tissue drain inserted beneath dura for several inches between brain and dura. Wound closed as usual with cotton.

Preoperative Diagnosis: Brain abscess, right cerebral.

Postoperative Diagnosis: Chronic subdural hematoma.

PROGRESS NOTES

9/10/44 Admitted to neurosurgery with chief complaint of sudden onset of headache, vomiting and visual disturbance.

9/11/44 Lumbar puncture. Initial pressure 200 mm. of water. Ten cc. spinal fluid taken which was clear and colorless. Final pressure 90.

9/22/44 Still having headaches. No vomiting. Pulse 54. Eye grounds normal. Should stay for further observation. Consider brain abscess.

9/29/44 Had encephalogram yesterday. There was some shifting of the ventricular sys-

tem to the left. May be right sided brain lesion. Patient states for past week has been having numbness of left hand coming in spells.

10/1/44 Operation yesterday. Found chronic subdural hematoma. Doing well today. Wound dressed. Drain removed.

10/5/44 Patient has done well. No sequelae. Sutures removed. Head redressed. Wound healing well.

10/14/44 Sitting up and walking. No headache or other complaints. Discharged today.

Note: Grandmother recalled patient hit head at bottom while diving sometime last summer but was not unconscious at any time. A letter received recently states that the patient is apparently completely well 6 months post-operatively.

COMMENT

During the hospital stay prior to encephalography a persistent bradycardia as low as 48, but usually in the 50's or 60's per minute, had been noted; and this led to the suspicion that there was more at hand than met the eye. Because of the obvious history of a staphylococcus aureus septicemia with recurrent bouts of osteomyelitis, the possibility of a co-existing encapsulated brain abscess was considered likely. It is to be noted that after operation the pulse rate increased somewhat, remaining 60-70 per minute during the remainder of his hospital course. As recorded in the progress notes, the patient was symptom-free on discharge from the hospital; and at this time (6 months later) is completely well.

As Davis states,[1] here, indeed, is a chronic subdural hematoma, "encountered when least expected".

The history and neurological findings are difficult to reconcile with the pathology found. No exactly similar case is recorded in the literature of the past 10 years; though Olkon[3] reported a case of acute psychosis without neurological signs in a patient who had shown vague personality changes for the previous year. A complete recovery resulted from operation (by Dr. Eric Oldberg).

Coleman[5] reported a case in 1934 of a man who complained only of pain over the left eye, attributed to sinus trouble, for 4 months following "a mild injury"; and who then suddenly developed severe pains in the left frontal region followed by stupor and vomiting. When admitted to the hospital 18 hours later, he was deeply comatose with widely dilated pupils; and in spite of operative drainage, died 18 hours post-operatively (36 hours after onset of acute symptoms).

An explanation for the acute onset of symptoms in our case is not immediately forthcoming. It is possible that a further hemorrhage in the subdural space was sufficient to "decompensate" the already compromised cerebral tissues. Or, it is possible that a leak or rupture of the hematoma sac may have altered the direction of its forces, though this is certainly doubtful in view of the thickness of the usual hematoma membranes.

Another possibility is that the subdural hematoma was only coincidental or was actually the result of previous hemorrhages from an intracranial aneurysm; though this is unlikely, considering the complete clinical recovery after operation. The presence of an aneurysm could not be ruled out without arteriographic studies. That subdural bleeding, instead of the usual subarachnoid hemorrhage, can occur from an intracranial aneurysm is indicated by Dandy who mentions a patient who had "four hemorrhages in two months and survived with a large subdural hematoma".[4]

SUMMARY

A case report is presented of a patient who had sudden onset of headache, vomiting, unilateral blindness, followed by loss of consciousness and convulsions. This cleared up within a day or two, except for persistent bradycardia, headache, and diplopia. Encephalogram revealed a right intracranial mass, which was found at operation to be a chronic subdural hematoma. Following operation, the patient made a complete symptomatic recovery.

A discussion of the possible mechanism underlying the unusual onset is given.

BIBLIOGRAPHY

1. Davis, L.: The Principles of Neurological Surgery. Lea and Febiger, 1942.
2. Peet, M. M., in Brock, Injuries of the Skull, Brain and Spinal Cord. Williams & Wilkins, 1943.
3. Olkon, M.: Chronic Subdural Hematoma with Acute Psychotic Manifestations, *J.A.M.A.* **110**:1664, May 14, 1938.
4. Dandy, W. E.: Intracranial Arterial Aneurysms in Comstock, 1944, page 10, under "Repeated Hemorrhages".
5. Coleman, C. C.: Chronic Subdural Hematoma (Case 1). Southern Surgical Transactions **47**:149, 1934.

DIAPHRAGMATIC HERNIA—CASE REPORTS

JAMES F. BLADES, M.D.,
and
RAYMOND BERGER, M.D.,
Richmond, Virginia.

Two singularly contrasting cases of diaphragmatic hernia are being reported since they offer interesting study from the basis of etiology, symptomatology and treatment. These cases also serve once again to evaluate the necessity of an adequate history.

No review of diaphragmatic hernia is undertaken in this discussion. It is acknowledged that two types of diaphragmatic hernia exist and we believe that the two cases to be reported represent an example of the congenital and the acquired types.

Case 1.—A congenital type of hernia is that of a white man 40 years of age. This patient is a truck driver and has been employed as such for some years. His chief complaint was "stomach trouble" which first appeared in 1932. Since then he has had frequent bouts of indigestion, which often are relieved by the ingestion of food. There was no associated nausea or vomiting.

The past history revealed one accident and one illness. Early in life he fell from a horse but suffered no incapacity after the accident. He had had a severe illness, diagnosed by his physician as pneumonia. No other medical attention had been required.

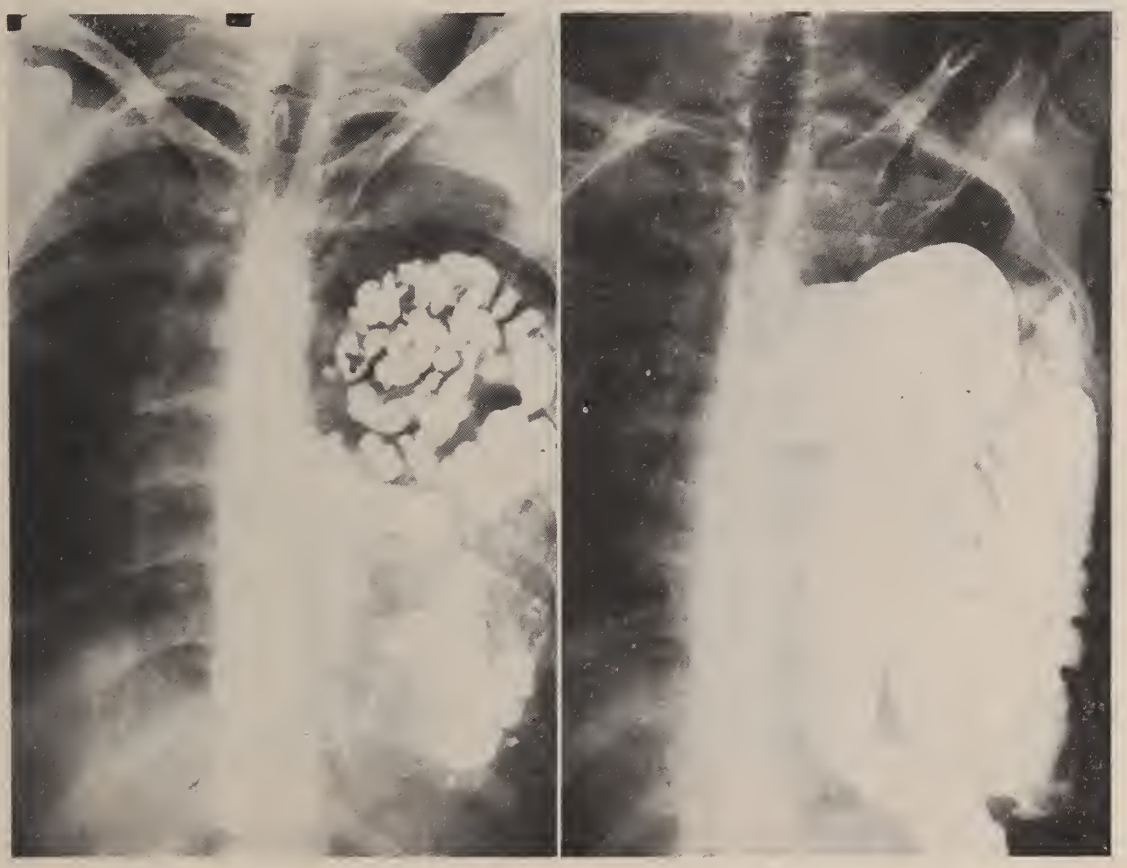


Fig. 1A and B

Because of the periodic episodes of gastric complaints a gastro-intestinal x-ray study was requested. Preliminary fluoroscopic survey revealed an abnormality in the left side of the chest which appeared

to be misplaced abdominal viscera in the left thorax. This was confirmed by films of the chest (figs. 1A and 1B).

The ingestion of a barium meal emphasized the abnormality noted and outlined its nature. The contrast material passed through the cardia of the stomach which was located below the level of the diaphragm. The stomach was twisted near the cardia so that the pylorus and duodenum were situated to the left of the main body of the stomach instead of to its right. The small bowel was found to be occupying a high, abnormal space, passing through the diaphragm in an anterior opening to the left of the true esophageal hiatus. Similarly, a part of the colon was found to pass through the same diaphragmatic defect. Consequently, most of the abdominal contents were misplaced to the left side of the abdomen and within the left thoracic cage.

Upon questioning the patient during the fluoroscopic procedure, he was surprised to learn about this abnormality. He, however, voluntarily spoke about the difficulty that his mother encountered in trying to find his cardiac impulse on the left side. His heart, of course, was displaced to the right side of mid-line.

Surgery was not advised in this case. His physiology had become adapted to this anomaly and the symptoms were mild. It seemed, therefore, unwise to resort to surgery for the simple restoration of the anatomy.

Case 2.—Our second case is considered to be a diaphragmatic hernia of the acquired type. The patient is a white housewife, 27 years of age. She was first referred for x-ray examination on March 1, 1943, because of an acute pain in her left shoulder. This pain simulated and suggested bursitis. However, no evidence of calcification was present in the region of the humeral head. In spite of the absence of calcification, radiation therapy was given to relieve pain. Within eleven days she received 900 r (in air) of x-rays to the shoulder girdle and by the end of the treatment there had been a decided improvement. At the end of 25 days she was entirely free from pain.

Fig. 2A and B

The patient was again referred for x-ray examination on April 21, 1943, for a gall-bladder examination. On this visit she gave a history of persistent vomiting of several days' duration. The oral cholecystographic material was given and films made after the usual 16 hour technique. It was impossible, however, to demonstrate a gall-bladder shadow. In view of her vomiting this was not considered to be an abnormally functioning gall-bladder. Instead, it seemed necessary to examine the stomach to determine if some sort of obstructive change was present which had prevented the absorption of the gall-bladder contrast material.

On administration of the barium meal, the cause of the failure of the gall-bladder to visualize was immediately apparent and the reason for the persistent vomiting determined. An extreme anatomical variation of the stomach was seen. The barium column passed down the esophagus in its normal manner and entered the cardiac end of the stomach as it should. From this point on, the stomach had been misplaced, being situated higher than normal and above the level of the cardia, ascending apparently through an opening in the diaphragm. The pyloric end of the stomach was drawn upward and to the left so that it occupied an area opposite the level of the cardia. The displacement caused this part of the stomach to be stretched. The duodenum was found to be directly below. In all respects the stomach assumed the shape of an inverted U with the base of the U in the thoracic cage above a level which was thought to be the diaphragm, although the latter could not be proved satisfactorily by x-ray (figs. 2A and 2B).

With this abnormality, the stomach could fill but after several hours it was able to empty only small amounts at a time. This would, of course, afford a reason for the persistent vomiting. A direct herniation of the stomach was obvious. This diagnosis prompted a review of the patient's past history in order to determine the etiology of the hernia.

Two years previously, February 13, 1941, she had been admitted to the Medical College Hospital with an acute illness which was diagnosed "acute cholecystitis". After a 48-hour period of observation, she was operated upon and acute pancreatitis found. Fat necrosis was present but very little hemorrhage. A drain was inserted into the foramen of Winslow and a rubber catheter was sutured into the gall-bladder and brought out through the wound.

The patient ran a prolonged and stormy postoperative course with a temperature curve ranging between 101 and 104 degrees. She was given multiple transfusions, saline and glucose infusions, sulfonamides and vitamins. Necrosis of the middle portion of the operative wound occurred, accompanied by considerable purulent drainage containing particles of necrotic pancreas.

On March 20, 1941, 42 days after operation, the patient developed a cough productive of considerable quantities of malodorous purulent sputum.

From April 24, 1941, to May 8, 1941, the patient's temperature gradually returned to normal and she was discharged.

A film of the chest made on April 24 showed an irregular density in the lower half of the left lung field having the appearance of an unresolved pneumonia (fig. 3).

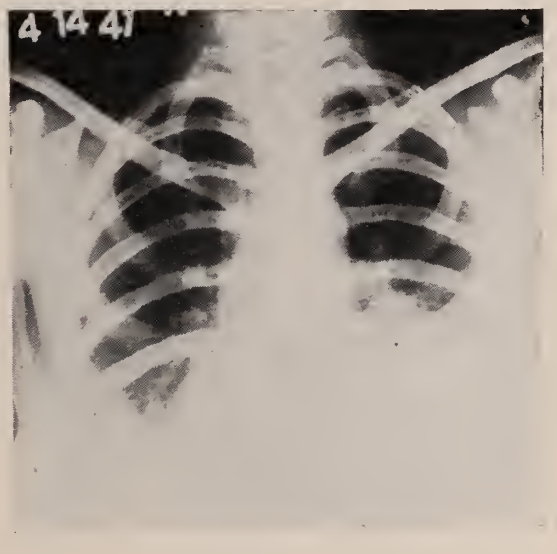


Fig. 3

The patient was seen on three occasions in the out patient department. At the time of the last visit, the note stated that she had no complaints. She appeared well, but did have an incisional hernia. She was next seen shortly before the present films were taken.

The factor of interest in this case is the pathogenesis of the hernia as portrayed by the history and x-rays. Her long course of spiking fever, following an acute pancreatitis and culminating in a period marked by a cough productive of purulent sputum, might indicate the development of a subphrenic abscess which eventually penetrated through

the diaphragm and ruptured into a bronchus. Following this episode, the temperature gradually returned to normal. This thesis is supported by the x-ray findings. On admission, the diaphragm was normal. Five or six weeks later an increasingly dense area appeared in the left supraphrenic area and the left leaf of the diaphragm became almost immobile. At the time of discharge, 11 weeks after admission, there was a dense shadow above the left diaphragm giving the appearance of an unresolved pneumonia. Two years later, x-ray showed a herniation of the fundus of the stomach through the dome of the left diaphragm.

In view of the patient's failing nutrition and the x-ray findings, it became obvious that surgical intervention for anatomical restoration was necessary.

An intercostal incision in the left sixth interspace was made and the thorax opened. Exposure was facilitated by dividing the seventh rib at its anterior extremity and inserting a mechanical retraction. The left phrenic nerve was crushed in order to paralyze the diaphragm on this side.

The method of approach for a hernia of this type caused little deliberation. The trans-thoracic route was chosen. This approach affords ready access for the dissection of adhesions above the diaphragm and facilitates repair of the hiatus. It also exposes the phrenic nerve for easy interruption of its function. Anticipating adhesions below the diaphragm, we made the necessary preliminary preparations for a combined abdominal-thoracic approach should it be indicated.

Repair in this case was simple. The margins were easily approximated with interrupted sutures of black silk. The line of closure was then reinforced by over-lapping the thinned-out, redundant portions of the lateral half of the diaphragm which had entered into the formation of the hernial sac (fig. 4).

The reconstruction of a largely deficient diaphragm in which simple suture will not suffice is a problem which has stimulated the ingenuity of many surgeons. Some interesting methods of repair have been suggested. First, fascia is occasionally used, either as a patch or as an interlacing suture; second, Rives[1] *et al* suggest a thoroughly anatomical method of repair of large defects of the anterior half of the diaphragm. The transverse abdominal muscle which is continuous with the diaphragm is dissected free from its costal attachment and allowed to slide upward and become the peripheral portion of the diaphragm; third, the same authors make use of latissimus dorsi muscle to reconstruct a deficient posterior portion of the diaphragm. The tenth rib is excised. A U-shaped muscle flap is fashioned from the central portion of the latissimus dorsi, turned in and sutured to the free margin of the deficient diaphragm; fourth, Gurd[2] reports a case of traumatic rupture of the diaphragm due to a

Fig. 4

power dive in an airplane. The diaphragm was largely deficient. He constructed a diaphragm from a flap dissected from the inner surface of the thoracic wall and consisting in parietal pleura, probably fascia of the intercostal muscles and possibly some atrophic fibres of the original diaphragm. There was no recurrence at the end of three years; fifth, in a reported case Pfeiffer[3] sutured the free margin of the diaphragm to the intercostal muscle. Where the deficit is not large, this would afford a simple and satisfactory method of repair; sixth, using the abdominal approach, Weinberg[4] reports a

case with the diaphragm deficient posteriorly, in which he used renal fascia to fill the defect.

SUMMARY

Two cases of diaphragmatic hernia, one of the congenital type and the other of the acquired type, are reported. The pathogenesis of the acquired hernia is considered. Methods of repair of diaphragmatic hernia are discussed.

BIBLIOGRAPHY

1. Rives, J. D., and Baker, D. D., New Orleans, La.: Anatomy of the Attachments of the Diaphragm—Their Relations to the Problems of the Surgery of Diaphragmatic Hernia. *Annals of Surgery* **115**: 745-755, 1942.
2. Gurd, Fraser B., Montreal, Canada: Rupture of the Diaphragm During a Power Dive—Description of a New Method of Repair and Case Report. *American Journal of Surgery* **59**:354-362, 1943.
3. Willard, John H., and Pfeiffer, Damon B., Philadelphia, Penna: Congenital Diaphragmatic Hernia—Report of Successfully Operated Case. *American Journal of Digestive Diseases* **7**:447-450, 1940.
4. Weinberg, Joseph, Omaha, Nebraska: Diaphragmatic Hernia in Infants—Surgical Treatment with Use of Renal Fascia. *Surgery* **3**:78-86, 1938.

805 West Franklin Street.

New Books.

Recent additions to the Library of the Medical College of Virginia include the following, which are available to our readers under usual library rules:

Ackerman—Health and hygiene. 1943.
Adams—Alexander Woolcott.
Beers—A mind that found itself.
Braasch—Pyelography. 1915.
Bunnell—Surgery of the hand.
Burke, ed.—Advances in nuclear chemistry and theoretical organic chemistry.
Call—Nerves and common sense. 1909.
Camac—Counsels and ideals from the writings of William Osler. 1905.
Case—X-ray examination of the alimentary tract. Part I, II and III.
Christopher—A textbook of surgery. 4th ed. rev. 1945.
Coca—Familial nonreaginic food-allergy. 1945.
Dattner—The management of neurosyphilis. 1944.
Davis—Elements of psychology. 1892.
Denison & Eklund—Eye, ear, nose and throat.
Drake & Clayton—Black metropolis.
Frew—Disease in childhood, a clinical study.
Garrison—John Shaw Billings, a memoir. 1915.
Gesell—How a baby grows.
Gottlieb—Diagnostic and operative foot surgery. 1944.
Grinker & Spiegel—War neuroses. 1945.
Guedel—Inhalation anesthesia.
Hamby—Hospital care of neurosurgical patients.
Hamilton & Boyd—Human embryology.
McFarland—Fighting foes too small to see. 1924.
McGuigan & Brodie—An introduction to materia medica and pharmacology. 1945.
MacLean—Diagnosis and treatment of renal diseases. 1927.
Mathews—Take it easy!
Miller & Bryant—Gynecology and gynecological nursing.
Murphy & Ladd—Emotional factors in learning.
N Y. Manhattan Eye, Ear & Throat Hospital—Nursing in diseases of the eye, ear, nose and throat. 7th ed.
Osler—Aequanimitas. 3rd ed.
Pharmacopeia Londinensis of 1618 reproduced in facsimile.
Pinckney—Three o'clock dinner (novel).
Piotrowski—A comparative table of the main Rohrschach symbols.
Ross—An introduction to analytical psychotherapy. 1932.
Sachs—The care of the neurosurgical patient. 1945.
Saleeby—The cycle of life according to modern science. 1904.
Schaefer—Elektrophysiologie, Vol. I: Vol. II. 1944.
Schlesinger—The age of Jackson.
Scott—A history of tropical medicine. 2 vols.
Scripture—Thinking, feeling—doing. 1907.
Smith—Desert Island Decameron.
Smyth—Atomic energy for military purposes. 1945.
Stegner—One nation.
Stern—Trauma in internal diseases with consideration of experimental pathology and medicolegal aspects. 1945.
Stoll—The cardiac glycosides. 1937
Strecker—Fundamentals of psychiatry.
Umbreit & Stauffer—Manometric technique and related methods for study of tissue metabolism.
Wasson—The chosen baby.

NAUSEA AND VOMITING OF PREGNANCY

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

This condition is classified as an early toxemia of pregnancy. Its management may not always be easy. The complaint should not be regarded lightly. When neglected its outcome is sometimes fatal. Organic disease is to be ruled out before a case of nausea and vomiting can be treated as such.

The mild case may require little treatment. This may consist of changing the patient's environment, separating her from the husband or family, relieving her of duties incident to the preparation of meals, meals on a two or three hour schedule rather than an attempt at three regular meals, alternate the liquids and solids—do not give both at the same time. Solids such as toast or crackers, should be given before the patient is up in the morning. Care must be taken that there is a sufficient quantity of carbohydrates and vitamins. Sometimes a little sedation may be a valuable accessory.

In the more severe case additional therapy is required. This case is differentiated because the nausea and vomiting has persisted in spite of simple measures. When the patient is unable to retain sufficient food and fluid, discontinue attempts at feeding by mouth. One reason that food is not retained is due to the fact that the patient has no feeling of hunger. Glucose. intravenously, will meet the immediate demand for fluid and afford a ready source of carbohydrate. Approximately 3000 cc of 10 per cent glucose should be given in a 24-hour period. At the same time vitamin B complex and Vitamin C should be given. At least one of the daily administrations of glucose should be in normal saline. Saline is needed to replace the chlorides lost by vomiting. Sedation may be secured by the use of sodium bromide (grs. xxx orally or grs. lx rectally, T. I. D.) or phenobarbital (gr ss orally or gr i rectally T. I. D.). Continued administration of the bromides may require an examination of the blood as the level may become too high Narcotics should be avoided as they, in themselves, may produce or prolong the symptoms of the disease.

There are some severe cases that will continue to vomit regardless of the above treatment. These will require additional sedation to the point that a Wangensteen tube may be inserted without particularly disturbing the patient. This tube may be used at intervals, for feeding. There is some question that the patient's opposition to the stomach tube may be a helpful factor.

An expression of a feeling of hunger on the part of the patient is an indication that it is time for a gradual return to oral feeding.

Nausea and vomiting of pregnancy has almost ceased to be an indication for therapeutic abortion.

Tropical Diseases Found in United States.

A number of diseases, formerly believed prevalent only in the tropics, have been found in the United States, according to an editorial in the December 8 issue of *The Journal of the American Medical Association.*

The editorial stated that "probably others will be imported in greater or less numbers not only by returning military personnel but as a result of augmented travel by air."

In conclusion *The Journal* said: "Tropical diseases threaten the health of the people of the United States sufficiently to warrant systematic efforts to identify and control them. American schools of medicine should provide adequate and required instruction in tropical diseases. In various seaports laboratories for the routine diagnosis and scientific investigation of these diseases, such as has been recently inaugurated by the Department of Health of the City of New York, should be established. Among other cities, Charleston, San Francisco, Baltimore and New Orleans would be admirable sites for the location of such laboratories, since, among other advantages, each of these cities could provide collaboration with existing medical schools. Doubtless also steamship companies and air lines that are engaged in the tropical trade would embrace the opportunity to participate in programs of this sort."

PUBLIC HEALTH

I. C. RIGGIN, M. D.
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for January, 1946, as compared with the same month in 1945, follows:

	JAN. 1946	JAN. 1945
Typhoid and Paratyphoid	7	4
Diarrhea and Dysentery	102	242
Measles	540	60
Scarlet Fever	267	359
Diphtheria	67	26
Poliomyelitis	1	4
Meningitis	36	23
Undulant Fever	2	2
Rocky Mountain Spotted Fever	0	1
Tularaemia	18	2

QUERYING PHYSICIANS FOR CAUSE OF DEATH.

A complete report of the causes of death on each death certificate filed in the State Bureau of Vital Statistics is essential to the compiling of accurate and meaningful mortality statistics. Obviously, incomplete returns relating to the cause results in unsatisfactory and misleading statistics. The Division of Vital Statistics of the U. S. Bureau of the Census also requires complete information, which is furnished routinely through the State Bureau.

On the whole, physicians in the State are very cooperative in answering queries for additional information relating to the cause of death sent out by the State Bureau. However, querying entails much unnecessary work and inconvenience to those to whom queries are directed. This could be avoided largely if physicians in filling out the *original certificates* would use especial care to give all requested items.

Information relating to violent death constitutes the most common omission. For example, in the case of accidental deaths of aged persons caused by injuries due to falls, the physician frequently states the *nature* of the injury (fracture, concussion, laceration, etc.) but fails to give the *means* of the injury—fall. In the case of violent deaths other than accidents, it is necessary to know whether the death was due to suicide or homicide and the *means employed*—gunshot, cutting instruments, poisonous gas, etc. When these facts cannot be definitely determined, the cause of death qualified by "probably" is acceptable for statistical classification.

Queries relating to the cause of death from *diseases* are necessitated by an apparent misunderstanding on the part of physicians as to the desired information concerning the *primary* cause. A statement of the immediate or terminal condition without mention of the underlying cause is insufficient. For instance, terminal pneumonia, acute cardiac dilatation, or acute nephritis are given many times without a statement of the original or underlying cause of the condition. When a positive diagnosis cannot be made, the qualification "probably" is satisfactory for statistical purposes.

In the case of surgical operations, the cause for which the operation was performed and the date of the operation are of prime importance in the assignment of the death. The statement on the certificate of the anatomical location, or probable location, of all tumors and cancers would save many queries. In order that all maternal deaths be tabulated correctly, details should be given relative to the period of gestation, complications of pregnancy or labor, and whether or not death occurred before or after delivery.

Last year the Bureau of Vital Statistics sent out 1,259 queries relating to causes of death. Answers were received from approximately 1,150 of these queries, which gave additional information enabling the Bureau to classify the causes of death more precisely, or which stated that further data were unavailable.

It should be possible to reduce the proportion of death queries to an insignificant minimum. More complete returns on the original certificates by physicians would not only save them from answering queries, but would simplify the editing of causes of death in the Bureau and make for more complete, accurate and prompt compilations of mortality statistics.

MEDICAL SOCIETY OF VIRGINIA

The Council

JANUARY 17, 1946

The Council of the Society held its regular meeting at the Society's office in Richmond on January 17th, with the President, Dr. Julian L. Rawls of Norfolk, presiding. Others attending were: Dr. W. L. Powell, Roanoke, President-Elect; Dr. J. D. Hagood, Clover, vice-president; Dr. H. B. Mulholland, University, past president; Drs. C. L. Harrell, Norfolk, Carrington Williams, Richmond, W. A. Porter, Hillsville, J. R. Gorman, Lynchburg, J. E. Knight, Warrenton, councilors; Dr. M. P. Rucker, editor of the MONTHLY; Dr. I. C. Riggin, State Health Commissioner; and Drs. Staige D. Blackford, University, and James P. Baker, Richmond, who represent the Society on the Department of Clinical and Medical Education, in assisting returning medical veterans. Several others, who had expected to attend the meeting, were unable to be present on account of the weather.

Before starting upon routine business, Dr. Rawls said that Mr. Simpson, a representative of the Hoffman-LaRoche Company, was present, and he asked him to speak to the members. Mr. Simpson said that his Company is deeply interested in medical bills now before Congress, so much so that all of their representatives in the field had been instructed to stop detailing drugs and fight Truman's Health Bill. He suggested that medical students be educated as to the bills before Congress and be asked to write to their parents and friends back home telling them of results that may be expected if they are passed in their present form. He felt that pharmacists, dentists and nurses should also oppose these bills as they likewise would be affected by them. He did not think there should be mass groups, but that through their county societies, these professions could do effective work in their congressional districts, with doctors taking the initiative.

Dr. Rawls thanked Mr. Simpson and then asked for minutes of the last meeting, stating that they had been published in the December 1945 issue of the MONTHLY. It was moved that reading of the minutes be dispensed with and that they be approved as printed.

The next matter for attention was the selection of dates for the annual meeting to be held at Virginia Beach. The president said he had talked with Mr. Banks, manager of The Cavalier, and found the weeks open were those with Monday on the 14th and the 28th of October. Upon motion, it was voted to hold the meeting in the week of the 14th.

The secretary announced that, on account of personal sickness, Dr. Hutcheson had been unable to prepare the report of Delegates to the December meeting of the American Medical Association. Upon inquiry as to time of publishing this, it was moved and adopted that it be used in the first possible issue of the MONTHLY after its receipt. (Published February 1946.)

Dr. Rawls spoke of the work of the Society's Committee on Public Relations and Medical Service in the interest of medical facilities in rural areas of the State, and he asked Dr. Mulholland, a member of the Committee, to read the report of the chairman, Dr. J. M. Emmett:

TO THE COUNCIL OF THE MEDICAL SOCIETY OF VIRGINIA:

The Committee on Public Relations met in Richmond on Thursday, January 3, 1946, and we were privileged to have present also Dr. Julian Rawls, President of the Medical Society of Virginia, to meet with the Committee.

Because of recent developments in certain political circles, it is felt that the welfare of our profession in this State and in the Nation is in jeopardy. We believe that, unless the medical profession sponsors a definite program to offer medical service at a reasonable price to the people generally, one of the pending undesirable bills will in all probability pass the Congress and be enacted into law. It is realized that Virginia's part in this program will necessarily be small, but we feel that if we had an established program working in our State, in all likelihood the passage of undesirable legislation will not affect us too adversely.

It is urged by this Committee that the profession in the State support the bills which will be offered in our Legislature covering medical care for the rural population and the lower income bracket group. These bills were created by a Commission appointed by the Legislature and your Committee on Public Relations served on this Commission. It is felt that the doctors in the State can determine the success or failure of this legislaion by their effort or indifference.

The Committee further feels that it is very necessary that a State-wide medical care program, sponsored by the Medical Society of Virginia, should be created and put into operation. We are not sure that the present service plans in the State cover sufficient territory to serve the purposes of our people as a whole.

Finally, the Committee feels that it is very necessary that we employ an Executive Secretary, preferably a lawyer of wide influence, to act in a full time capacity in the interest of the medical profession. We believe that such an Executive Secretary will serve to educate our profession primarily as to its needs and that by association with similar Executive Secretaries a better rounded program for our profession may be developed and ultimately better relations may be established between our profession and the public as a whole. The Committee feels that this appointment should be made without in any way affecting the present office personnel representing the Medical Society of Virginia.

It is our belief that the appointment of the proposed Executive Secretary will increase the duties of the present personnel in the Richmond office. We believe that the compensation offered this Executive Secretary should be sufficiently attractive as to enable us to secure a vigorous, high type individual.

J. M. EMMETT.

It was felt that doctors should acquaint themselves with bills before the General Assembly as well as before Congress. A recommendation in the Hill-Burton bill has to do with the building of hospitals and there was a general discussion as to financing the building of hospitals if that bill is passed.

Dr. Rawls had written to several societies employing Public Relations officers to find out what dues are paid. These ran from $20.00 a year up. Dr. Rawls said the Committee would like authority to appoint such a man to visit societies and doctors throughout the State, to acquaint them with matters of vital importance to the profession. Dr. Mulholland then moved the adoption of Dr. Emmett's report which was seconded by Dr. Harrell and carried.

In regard to financing this plan, Dr. Rawls felt that contributions would be made by a number of the doctors, if the matter was presented to them through the journal. Dr. Riggin felt, however, that we should use money already in the treasury and go ahead with the plans.

Dr. Harrell then moved that the Public Relations Committee be empowered to employ someone to go ahead with this work. This was seconded, after which Dr. Williams offered an amendment that the President and President-Elect be added to this committee in making the selection. Dr. Harrell accepted the amendment, and this motion was then seconded and adopted.

After discussion as to the amount to be allowed for the above work, a motion was passed that the Committee be allowed $12,000 for the first year to establish the work, this to pay salary of the officer in charge and expenses incident to the work.

Dr. Knight wished to know what the man selected would have to do. It was stated that at first he might have to visit societies who employ such officers in order to get their ideas, and he would have to find out what the people want through Parent-Teacher Associations, Home Demonstration Clubs, etc. Dr. Gorman said that Lynchburg started an educational plan on medical service and they secured an excellent man for this work who had spoken to various clubs in that city. Dr. Riggin felt that in speaking of the bills, reference should not be made to socialization but to federalization of medicine.

Recess was then taken for lunch.

Upon resuming business, Dr. Rawls asked Dr. Staige Blackford to tell the Council something of the work which had been done for returning medical veterans, through the Department of Clinical and Medical Education of the Society. Dr. Blackford said that he was working through the University of Virginia and they had secured services of Dr. James P. Baker to handle the program at the Medical College of Virginia. They had prepared a concise statement of what is being done and this appeared in the January 1946 issue of the VIRGINIA MEDICAL MONTHLY (pages 1-3). The refresher course at the University in December was well attended. It is their plan to have another course there in June, and courses at the Medical College of Virginia in March and September. Registrations are limited, ex-service doctors being given preference. They have arranged for residencies, internships, etc. When veterans come to their offices, they tell them what they have planned but make no suggestions. He and Dr. Baker, who was also called upon, felt that placing returning doctors in residencies will be a problem for several years, as many went into service after only nine months' internship.

Following this, a letter from Dr. A. D. Hart was read, in which he expressed appreciation for the compensation from the Society for his service in inaugurating this work.

Dr. Rawls said he had recently attended a meeting of the Committee appointed by the Virginia Advisory Legislative Council to investigate rural health and medical care in Virginia. It has prepared its report and this has been submitted to the Governor by the Council. He felt this is so important a matter that he had agreed the Society would assist in getting their report to all doctors in the State.

He further stated that there has been a lack of coordination between organizations working in behalf of health problems and about forty organizations have formed a Health Council. They plan to have an office with a secretary, and hope to carry health education to the people of the State. He felt the Society would be called upon to contribute something to help get the organization going. Dr. Riggin and others working on this organization are much interested. Dr. Riggin said he felt it to be a move in the right direction as some organizations are working without knowing what others are doing. Dr. Rawls said the Health Council would be the coordinator for all these organizations. As many of the groups have no money, this Society might be called upon to contribute perhaps $250 to $300. Dr. Sanger had suggested that they might try to secure assistance from some Foundation, but that they would have to put something into it first. Dr. Rawls said there had been two meetings since the Council was organized, and both were well attended. He would like for Dr. Mulholland or someone to be authorized to say that the Society would contribute the above amount.

Dr. Mulholland, who is chairman of the Health Council, also felt that if the Society showed an interest in the Council by contributing something financially, they might later secure assistance from a Foundation. The organization is complete and will have a meeting in Richmond on January 26th. He felt that the amount suggested by Dr. Rawls was all right and might be given with the statement that, if more is needed, the Society's representatives would see what could be done. Dr. Gorman then moved that the Medical Society of Virginia appropriate $250 for this organization, to show interest in it, when we are assured that it is going on all right. This was seconded and carried.

Dr. Rawls said he had received a letter from Dr. Walter C. Swan of Huntington, W. Va., with regard to a joint meeting of the West Virginia State Medical Association with the Medical Society of Virginia, and he thought

consideration should be given this matter. The Council felt this was for the attention of the House of Delegates rather than so small a body as the Council, and it was suggested that Dr. Rawls write Dr. Swan stating that this would come up for attention at the next meeting of the House of Delegates, with a view to having a joint meeting of the societies at either Hot Springs or the Hotel Roanoke in 1947 or 1948.

A letter from the American Epilepsy League with regard to treatment of epilepsy was ordered referred to the Society's Committee on Mental Hygiene.

Dr. Rawls said he had asked Dr. N. F. Rodman of Norfolk to attend a meeting recently held in St. Louis, on Medical Service and Public Relations.

Dr. Carrington Williams and Dr. James R. Gorman were appointed by the president as the Budget Committee of the Council to prepare and present a budget to the next meeting of the Council and House of Delegates.

The Secretary said she had received a letter from Dr. Henry A. Bonynge, a member of the Medical Society of the State of New Jersey, who has recently retired and located at his country home near Gordonsville. As the Orange County Society has been inactive because some of its members had been in Service and the former president had died, she had written Dr. Lewis Holladay who heartily endorsed Dr. Bonynge for membership. A motion was made and carried that he be accepted into the Society.

Dr. Carrington Williams said the secretary had sent him a list of the counties in his district and he asked for instructions, stating that he would be glad to do whatever is expected of him. It was decided that Dr. Rawls should advise the presidents and secretaries of the component societies that their councilors will visit them, if so requested. Dr. Williams then asked that the councilors be advised of the activities about which they might tell societies. A motion was made that the Councilors be supplied through the Public Relations Committee with information of special interest that they might carry it to the societies. This was seconded and carried.

Dr. Rucker said that Dr. J. K. Hall had phoned him with regard to publishing a list of members who had been in Service and securing photographs from them to be used with the notices. The Council approved the publication of the membership list, designating those who had been in Service, but referred this to the Publication Committee for their recommendation.

Dr. Rawls then officially introduced Dr. J. D. Hagood, first vice-president, and welcomed him to the meeting, to which Dr. Hagood responded.

A discussion on the inadequacy of medical care in the State and the lack of beds at tuberculosis sanatoria brought out the fact that the work of the State Department of Health is seriously crippled by lack of funds with which to secure sufficient personnel. Following this, motion was made by Dr. Harrell, seconded by Dr. Williams, and adopted that the Council go on record in recommending to the Governor of Virginia that the compensation of all employees in the State Department of Health be in keeping with salaries of employees in similar positions throughout the country, in order that the Department may retain and obtain efficient personnel in its bureaus and hospitals.

Dr. Mulholland said that at the last meeting of the House of Delegates the question had been raised as to a loan fund for returning veterans for postgraduate work and that the Council was authorized to investigate this, with authority to act. The secretary was instructed to ask Mr. Duval, attorney, as to the legality of such a fund. Dr. Gorman said the Lynchburg Rotary Club had a loan fund and they had found that, if properly administered, it worked all right. They had lost very little. The president appointed a committee composed of Dr. Carrington Williams, chairman, Dr. James R. Gorman and Dr. A. F. Robertson to study the legality of the question of a loan fund for worthy veterans and, if found legal, suggested that they be empowered to establish such a fund to the amount of $10,000. The interest to be charged would be left to the committee. This, put as a motion, carried, with Drs. Porter and Harrell voting in the negative because of the amount of money involved.

There being no further business, the meeting adjourned.

AGNES V. EDWARDS,
Secretary.

Approved
JULIAN L. RAWLS,
President.
February 4, 1946.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President ..... MRS. P. M. CHICHESTER, Abingdon
President-Elect ..... MRS. J. E. HAMNER, Petersburg
Recording Secretary .. MRS. NATHAN SCHUMAN, Alexandria
Corresponding Secretary .. MRS. L. C. BRAWNER, Richmond
Treasurer ..... MRS. REUBEN F. SIMMS, Richmond

MID-WINTER REPORTS

Richmond.

The Auxiliary to the Richmond Academy of Medicine held its first meeting of this year in the Academy building on September 17, 1945. The Nominating Committee presented the slate of officers for the coming year which was unanimously accepted.

On October 16, we were hostesses at a subscription luncheon for the Annual State meeting of the Auxiliary to the Medical Society of Virginia.

On October 19, we held our regular monthly meeting. This was a luncheon meeting at which time the installation of officers was held. It was unanimously voted to have a luncheon preceding each meeting until voted otherwise. It was also voted to give a Get-Acquainted bridge party to welcome the returned servicemens' wives, and to endeavor to increase our membership.

This bridge party was given on November 11 at the Academy building.

The November monthly luncheon meeting was held on the 18th. Mr. Walter Craigie was our guest speaker, and his topic was "Richmond Health." In the short business meeting which followed, the motion to equip the Academy kitchen with dishes and silverware was unanimously carried. Acting upon the suggestions of Mr. Craigie, we passed a motion to contact our Advisory Committee for their approval of our new projects. At this meeting we added five new members.

Our December luncheon meeting was held on the 14th. During the business meeting, a report of an Executive Committee meeting held on November 26 was read and accepted. This report included the reading of the letter written to the Advisory Committee and their reply. The letter to the Advisory Committee outlined the following new projects:

(1) Following Mr. Craigie's suggestion, we desired to appoint a committee to go see Dr. Porterfield and Mayor Herbert requesting that something be done about the Rat Control problem and be able to follow any suggestions they may offer, as we consider this a public health menace.

(2) Aid by personal service the new Cancer Prevention Clinic and follow any suggestions offered by Dr. Gathright, who is to be our guest speaker in March.

(3) Enlarge our work at Crippled Childrens Hospital, continue our work at Sheltering Arms Hospital and begin volunteer work at McGuire Hospital and in the T. B. Clinic.

This letter was passed by the Advisory Committee and the Academy of Medicine. In addition, the Advisory Committee suggested holding a joint banquet of the Academy and the Auxiliary. This likewise was accepted by the Academy. The business meeting was followed by a Christmas party, and the toys received were donated to the Crippled Childrens Hospital. At this meeting we added three new members to the Auxiliary.

An Executive Committee meeting followed the Christmas party, at which time a letter was written to be sent to delinquent old members, and another one to be sent to prospective new members, inviting them to join the Auxiliary.

MATILDA CHALKLEY, M. D.,
President.

Petersburg.

The Petersburg Medical Auxiliary has twenty-seven members.

Our Auxiliary recently raised approximately $50, proceeds from a rummage sale.

We are working towards a proposed plan to purchase some needed articles, possibly a resuscitator for the Petersburg Hospital Nursery. Definite plans have been made for our Annual Linen Shower in February for the Hospital.

We have secured seventeen subscriptions to Hygeia.

We donated five Christmas boxes for sick soldiers at Camp Lee and have subscribed to the Leigh-

Hodges-Wright Memorial Fund.

CORDELIA B. DODD,
(MRS. C. S. DODD) *President.*

Alexandria.

The Woman's Auxiliary to the Medical Society of Alexandria had its first monthly meeting in September with Mrs. Sam Novak, the new president, conducting.

It was decided by our organization that we would have only one money-making project for the year and everyone would do everything possible to make it a success. A bingo party to be given sometime in February was agreed upon as our best opportunity for a financial success. Most of our time is being spent in preparation for the party.

For our other activities we plan to cooperate with the other organizations, the social agencies, churches, Red Cross, etc., in an effort to coordinate postwar programs.

We financed a Sunday night supper for the service men and women at the U. S. O.

For Christmas we presented two table lamps to the doctors for their lounge and we contributed toys for the Children's Ward at the Alexandria Hospital.

We meet monthly at the homes of the members and the meeting consists of a business meeting and a program.

ROSSELL M. HIGHTOWER.
Secretary.

Norfolk.

In submitting this report covering our work from October 1, 1945, to date, it gives me pleasure to state that our auxiliary has been able to make and carry out plans conforming to the work done in previous years.

At our annual meeting held November 5th, our retiring president gave her report and her various chairmen gave their summaries for the year. We all felt fortunate at having had such splendid leaders for the year 1944-45.

We heard an inspiring and interesting report given of the annual meeting of the State Auxiliary held October 16th.

At this meeting our officers for the twenty-fourth year of our organization were installed.

The first Executive Board meeting was held November 14th. Our committee chairmen were either present or accounted for and we started our year with many enthusiastic ladies ready to carry out our many plans.

Our records show 118 on roll, out of which 80 are paid—up to date. We have welcomed five new members and several of our returned veterans' wives.

With the usual illness and sadness in our midst our courtesy chairman has been active in performing the duties of her office.

Our treasurer has already sent our customary donations as follows:

State Maintenance Fund	$10.00
Leigh Hodges Wright Fund	10.00
Jane Todd Crawford Fund	5.00
Our Local Benevolent Fund	5.00

At Christmas-time, $10.00 from our treasury and $15.00 by individual contributions was forwarded to the Tidewater Camp and Hospital Service Council of the Red Cross to be used for Christmas gift packages for wounded and sick service men hospitalized in our area.

Two gift subscriptions to *Hygeia* were placed in two schools in our community.

When the Seaboard Medical Society met at Virginia Beach December 13, 14 and 15, our auxiliary gave a bridge party Wednesday the 14th. We were glad to assist in acting as hostesses for this group of our Doctors.

Our next meeting is scheduled for January 22nd. At this time Dr. George Duncan will tell us of his work overseas. We invited representatives from all the women's civic organizations in town and our public relations chairman is in charge.

On February 22nd, we are arranging a dinner party at which time we plan to honor our returned veteran doctors. We are cooperating with the Medical Society in working out the details of this party.

March 26th is the date we have set as Doctor's Day. Dr. Bickford, our school psychiatrist will speak. Mrs. Reynolds, chairman of our Health Education, has charge of the program for the day. We hope to have our state president as our guest of honor.

May 28th we have scheduled as our early summer meeting. No program has been planned for this time.

In October we look forward to entertaining the ladies who attend the State meeting at a tea.

Our fall meeting will be in the form of a reception at my home with the annual reports and new officers installed.

MARY ANN MCCOY,
President.

Editorial

The 1946 Conference of State Secretaries and Editors

THESE conferences have no official status in organized medicine. Those in attendance can pass no resolutions and, even if they agreed upon anything, there is no way of implementing the resolution or motion. Perhaps for that very reason, the meetings are interesting. We can talk a subject through without restraint. For the first time within the memory of the oldest editor, Dr. Olin West was not present. He had been ill in the hospital and had not recovered sufficiently to be present. We all missed him. Dr. R. L. Sensenich, Chairman of the Board of Trustees, General George F. Lull, Associate General Manager of the American Medical Association, and Dr. Morris Fishbein, the Editor, played the host and made us feel at home.

The first subject discussed was the current status of medical legislation. Largely through the efforts of the A.M.A. the G.I. bill of rights has been liberalized in regard to post-graduate education for the medical veteran. He can be paid for the courses he takes in his terminal leave and he can use some or all of the money due him in a succeeding year to take a more intensive course in the current year. Formerly he could be paid only $500 a year for tuition. Now if he need, say $600, for tuition the first year he can get it by deducting a proportionate part of his next year's allowance for tuition. Then, too, his maintenance allowance has been increased. The approved hospitals that give residences and assistant residences for veterans are classed as educational institutions and are entitled to receive "tuition".

It is rumored in Washington that the Wagner-Dingell-Murray bill is dead but may be resurrected in a different form. So many "health" bills have been introduced that the feeling in Washington is that they will all be pooled except possibly the one creating a psychiatric institute, and that a single bill covering all aspects of the health measures will be written. Some features of the Wagner bill may be included.

F. S. Crockett, Chairman on Rural Medical Service, opened the discussion on plans for medical care in rural areas. He was very complimentary of the work that Dr. Mulholland and his committee have done in Virginia. Whether the scholarships for medical students who would practice in rural areas would work he questioned, but he thought it ought to be tried. As an example of the importance of an educational program he cited the poor results in the effort to sell the Blue Cross plan in Craig County, Virginia. Representatives from Nebraska, Colorado and Utah entered into the discussion. The great distances and the deep snows in winter gave them the greatest trouble. When they were talking it made our problems in rural Virginia seem simple. In Utah the Mormon church has made a state-wide survey of the hospital needs and has the money to match that raised by any Utah community for a hospital. There will be no religious test for the patient and they do not want Federal aid. These Westerners were emphatic in their statement that they did not need ambulances to take the sick to the hospital. Every family had an automobile that would do.

The discussion of the plans for aid to the returning medical veteran centered about hospital residences where the veteran could continue his medical education, and aid in equipping an office to those who wished to enter practice upon separation. There will be from four to five thousand residences available by April first. The second problem seems to be a more difficult one. Robert C. Ayers, Director, War Property Distribution of the Federal Security Administration, led this part of the discussion. He said that it would take 26½ years to dispose of the surplus property. The veteran had a third priority, only the Federal government agencies and State government

agencies having higher priorities. The greatest difficulty for the veteran is the frequent change in the technic of disposal. At present if the veteran can get his priority acted on and his order in by March 15th, it may be filled by the Small War Plants Corporation. After this corporation goes out of existence on that date, no one knows what to do. In the very beginning officers of the A.M.A. waited on the proper authorities in Washington and suggested that sets of complete office equipment be gotten together and rented to doctors settling in rural areas for $1.00 per annum. The authorities thought that a good idea but in a few weeks a change was made in the method of handling the war surplus property and nothing more was heard of the plan. In Massachusetts there is difficulty in finding office space, but it is impossible to equip it when once it is found. Sterilizers, for instance, can not be had at any price and as for a new car the new doctor has one chance in one thousand of getting one. It was said that recently a government official went to the A.M.A. headquarters to have published the latest information on this subject for the medical veteran. He took two days to get to Chicago and when he arrived his plan was out of date.

In contrast the Veterans Administration seems to know what it wants. Col. James C. Harding led this discussion. It fell into three heads, veterans' hospitals, the care of patients in hospitals, and the care of ambulatory patients. The Administration wants their hospitals to be the equal in every way to the best teaching hospitals in the country and is organizing them on that basis. A male veteran with a service connected disability who needs hospital treatment must go to a veterans' hospital if possible. On the other hand, a female veteran with a service connected disability may be treated in a private hospital if that is more convenient. This difference in the law dates back to the first World War when there were so few female veterans that it did not seem worth-while to make provisions for them in veterans' hospitals. It is the Administration's desire for the ambulatory patient to be treated by his family physician if he does not need hospital treatment. The method of paying for this service is a matter of experimentation. Two plans at the state level are being tried. In Kansas the State Medical Society is cooperating with a plan. They have furnished a list of its members who are willing to undertake this work at fees agreed upon by the State Society. The Administration has a state agent with office in the Medical Society's headquarters. The doctors send their bills to him for payment. In Michigan, the Medical Service Plan which is owned and operated by the State Society has undertaken to act as agent for the Veterans Administration. Michigan already had a uniform state-wide fee schedule for governmental agencies, and the Administration adopted this without change.

At the dinner meeting Henry A. Davidson, Editor of the *Journal of the Medical Society of New Jersey,* conducted a clinic on editorial problems. The discussion was pretty general and covered all departments of the state journals except advertisements. It seemed to be the general opinion that news from the county societies was the part of the journal most widely read but most journals had trouble in getting the news notes. In New York they get this news from the local papers, whereas in Connecticut the journal has its own reporter in each county.

Public Relations of American Medicine was the leading topic of Saturday's session. Morris Fishbein gave an excellent historical review. Many of us were surprised to learn that in 1912-13, shortly after Lloyd George had put over the panel system on England, the House of Delegates of the American Medical Association went on record as favoring compulsory pre-payment insurance. Then came years of opposition to state medicine and even to voluntary local pre-payment plans. Now the House of

Delegates is in favor of extending the local plans as rapidly and as widely as possible, consistent with sound financing. John Hunton, Executive Secretary, California Medical Association, said that in California they believed so strongly in the value of Public Relations that they had courses on it in the medical schools and that the Los Angeles County Medical Society, which had several thousand members, required the candidate for fellowship in their society to take and to pass such a course before election. Edward Stegen of the National Physicians Committee for the Extension of Medical Care spoke of Public Relations as a new science, but after all was said and done, the satisfied customer was the best possible advertisement.

The National Conference on Medical Service

THE Nineteenth Annual Meeting of the National Conference on Medical Service was held at Chicago on February 10. The meeting was well planned. The president in his address reviewed past crises or cycles as he preferred to call them, from Joseph's administration in Egypt to Louis XIV in France. In times of stress the people look to their government and lose their liberties.

There was an address by Nelson Cruickshank, Director of Social Insurance Activities of the American Federation of Labor. He said that since 40 per cent of American manhood was rejected by the Selective Service, and since the United States ranked ninth (or eleventh) in infant mortality, there must be something wrong with the distribution of medical care. The American worker knew what the best medical care was, and he wanted it and intended to get it. The only way to do this, according to labor, was by the Wagner-Murray-Dingell bill.

What the Farmer Expects from Medicine was discussed by J. S. Jones, Secretary, Minnesota Farm Bureau Federation, and Chairman National Committee for Rural Health. He said he could agree with the preceding speaker if he substituted for "compulsory" the word "co-operation". The farmer knew he got more by co-operation. He had solved the tuberculosis problem and the infectious abortion of cattle by such means. He now knew the value of physical examinations, and he had a good Blue Cross Plan. Out of 40,000 farm subscribers in Minnesota, only three cancelled their contracts. He saw the need for some aid to the farmer's boy in getting a medical education, for such a doctor would more likely settle in a rural area. There was also need of more health facilities such as nurses and diagnostic centers.

Howard Strong, Secretary, Health Advisory Council, Chamber of Commerce of the United States, read a paper on "What Industry Expects from Medicine". The plant doctor in large industries has demonstrated his worth in reducing absenteeism and in promoting better health and better relations with employees. He should have more authority, possibly the rank of a vice-president. Both management and labor should respect the "privilege communication" character of his examinations and his dealings with the individual worker. Small plants that have less than 500 workers find it impossible to employ a full time specialist in industrial health. Such plants should join other plants for the purpose of having such a person. Industry should support research in industrial medicine, and should encourage the industrial health doctor to improve himself by attending meetings and taking post-graduate courses.

The afternoon program covered such topics as Medical Care of Veterans, Aims and Purposes of Conference of Presidents and Other Officers of State Medical Societies, Plans for Aiding the Returning Medical Officers, and National Plan for Voluntary Prepayment Medical Care, but the early departure of the Liberty Limited precluded your editor's attendance.

News

Tri-State Medical Association of the Carolinas and Virginia.

The meeting of this Association in Richmond, February 25 and 26 was well attended and a number of interesting papers were presented. At the closing session, Dr. John Wyatt Davis of Lynchburg was installed as president, and the following were elected to serve with him: President-elect, Dr. S. Raymond Thompson, Charlotte, N. C.; vice-presidents, Dr. J. Asa Shield, Richmond; Dr. W. W. Fennell, Rock Hill, S. C.; and Dr. R. B. Davis, Greensboro, N. C. Dr. J. M. Northington, Charlotte, N. C., was re-elected secretary-treasurer. The six new councilors are: Dr. Rex Blankinship, Richmond, and Dr. Russell Buxton, Newport News, Dr. C. M. Gilmore, Greensboro, N. C., Dr. G. Grady Dixon, Ayden, N. C., Dr. F. E. Kredel, Charleston, S. C., and Dr. William R. Wallace, Chester, S. C. It was decided to hold the 1947 meeting at Greensboro, N. C.

Legislation Upheld.

At the present session of the General Assembly, the chiropractors and naturopaths presented a bill, requesting an amendment to the Healing Arts Act of 1944, to write in a "grandfather" clause, permitting *all* chiropractors and naturopaths practicing in Virginia at that time permanent exemption from examinations by the State Board of Medical Examiners. (In 1944 they had been given five years in which to comply with the law.) This came up on the floor of the Senate and, after discussion, was voted down by a vote of 22 to 15.

Veterans Administration Hospital.

On March 31, the McGuire General Hospital at Richmond will be transferred by the Army to the Veterans Administration, and Lt. Col. Edmund M. Ellerson, formerly of Washington but who entered the service from Staunton, has been detailed from his position at the VA Hospital at Kecoughtan to serve as acting manager of McGuire Hospital and handle arrangements for receiving it from the Army. During the war he was executive officer of the 83rd General Hospital in England.

Dr. J. Powell Williams of Richmond, who served with the rank of Colonel with the 45th General Hospital in North Africa and Italy, has been named VA chief of medical service for the hospital.

Lynchburg Academy of Medicine.

New officers of the Academy are: President, Dr. Edwin A. Harper; vice-president, Dr. Holcombe H. Hurt; and secretary, Dr. Harry W. Hollingsworth.

On January 14th, the Academy was addressed by Major Louis A. Cibelli of the Veterans Administration, Roanoke, his subject being "What the General Practitioner Can Do to Help the Veterans Administration."

At the February meeting, the guest was Dr. Staige Blackford, University of Virginia, who spoke on "Gas in the Gastro-Intestinal Tract".

Virginia Peninsula Academy of Medicine.

At the meeting on February 18th, the Academy was addressed by Dr. Guy W. Horsley, Richmond, his subject being "Surgery of the Colon as Seen in an Overseas Hospital". There was an attendance of fifty-five.

Dr. Harvey G. Bland is president of the Academy and Dr. Chester D. Bradley, secretary-treasurer. Both are of Newport News.

Returned Medical Officers

Interested in further hospital training, leading to the fulfillment of qualifications for speciality board certification, should communicate now with Dean J. P. Gray, of the Medical College of Virginia school of medicine, Richmond.

Selection of resident staff members for the McGuire General Hospital, now an Army hospital but to be made a Veterans' Administration hospital on or about April 1, 1946, is now being made by the Dean's Committee.

Opportunities will be available in all fields, including general medicine, general surgery, medical specialties, and surgical specialties, but not in obstetrics or in pediatrics. Duration of training, in individual instances, will be dependent upon previous training and experience.

Promotions in Service.

Dr. F. Jason Crigler, Charlottesville, has been promoted to Lieutenant Colonel, MC., AUS.

Dr. William H. Woodson, Newport News, has been promoted to Lieutenant, MC., USNR.

Back in Civilian Practice.

The following doctors, in addition to those previously announced in the MONTHLY, have advised us of their release from service and reopening of their offices:

Dr. F. P. Barrow, II, Portsmouth, is now associated with Dr. L. Freeland Magruder in the practice of radiology. He was division surgeon of the 29th Infantry Division prior to and including the fighting in Normandy and Northern France, during which time an injury necessitated his return to this country for treatment.

Dr. George S. Fultz, Jr., formerly of Butterworth, is associated with Drs. Masters and Shield at Tucker Hospital in Richmond. He is a graduate of the class of 1938, Medical College of Virginia.

Dr. R. Earle Glendy, Roanoke, has opened offices at 820 South Jefferson Street for the practice of internal medicine with special interest in diseases of the heart and circulation.

Dr. George Smith Grier, III, Newport News, is now with the Department of Pathology of the Medical College of Virginia where he will be for six months. He will then return to Newport News.

Dr. John R. Hamilton, Nassawadox, has opened temporary offices at the Northampton-Accomack Hospital with practice limited to internal medicine.

Dr. E. Bowie Shepherd has opened offices in the Professional Building, Richmond, where he will limit his practice to internal medicine.

Dr. Harry B. Stone, Jr., Roanoke, is associated with his father in the Medical Arts Building for the practice of opthalmology and otolaryngology.

Dr. Robert V. Terrell, Richmond, is home again and has resumed practice of proctology in Medical Arts Building.

Others who have reopened their offices are:

Dr. Richard A. Bagby, Richmond.
Dr. Henry L. Bastien, 3260 Wilson Boulevard, Arlington.
Dr. H. R. Bourne, Masonic Temple, Danville.
Dr. Julius F. Chairsell, Radford.
Dr. F. O. Fay, Medical Arts Building, Norfolk.
Dr. J. Bernard Jones, Culpeper.
Dr. E. W. Kirby, University of Virginia Hospital, Charlottesville.
Dr. Gershon J. Levin, Wainwright Building, Norfolk.
Dr. Bernard I. Lidman, 1406 West Princess Anne Road, Norfolk.
Dr. Roger G. Magruder, Charlottesville.
Dr. Lawrence J. Motyca, 7419 Muirfield Road, Norfolk.
Dr. Sigmund Newman, Vienna.
Dr. Alfred M. Palmer, 939 North Jackson Street, Arlington.
Dr. Thomas B. Payne, Fredericksburg.
Dr. Benjamin F. Phillips, Quantico.
Dr. Prosser H. Picot, Alexandria.
Dr. R. C. Potter, Marion.
Dr. Wm. V. Rucker, Bedford.
Dr. O. N. Shelton, Orange.
Dr. George W. Simpson, 3803 East Indian River Road, Norfolk.
Dr. Douglas B. Stratton, 827 10th Avenue, S. E., Roanoke.
Dr. James W. Tankard, 100 Hopkins Street, Newport News.
Dr. George Thrift, Medical Arts Building, Richmond.
Dr. W. R. Tyson, 821 Brandon Avenue, Norfolk.
Dr. Roy W. Upchurch, Masonic Temple, Danville.
Dr. J. Franklin Waddill, 719 Westover Avenue, Norfolk.
Dr. William H. Whitmore, St. Vincent's Hospital, Norfolk.
Dr. L. K. Woodward, Front Royal.

Drs. Grossmann and Henderson Resign.

Dr. William Grossmann, head of the Bureau of Communicable Diseases of the State Health Department, has resigned to take post-graduate studies at the University of Virginia. He has been with the Health Department since 1935 and recently returned from Service in the Medical Corps.

Dr. Harry Henderson, assistant epidemiologist, has also resigned to take post-graduate work at the Medical College of Virginia. He had come to the Department five years ago from the United States Public Health Service and had taken over Dr. Grossmann's work while he was in the Service.

A Postgraduate Course in Diseases of the Chest.

Will be given under the auspices of the Illinois Chapter of the American College of Chest Physicians at Michael Reese Hospital, Chicago, Illinois, during the week April 1st to 6th, inclusive.

Doctors may elect to follow this week's formal course with practical instruction in the fields of thoracic surgery, bronchoscopy, pneumothorax, bronchography, and other methods and technics in the diagnosis and treatment of pulmonary disease.

Further information may be secured at the office of the American College of Chest Physicians, 500 North Deaborn Street, Chicago 10, Illinois.

Jefferson Medical College News.

Dr. John H. Gibbon, Jr., has been appointed Professor of Surgery and Director of Surgical Research

of The Jefferson Medical College, according to announcement by the Board of Trustees. He will replace Dr. George P. Muller, Grace Revere Osler professor of Surgery, who will retire at the end of the current school term in March. Dr. Gibbon, a native of Philadelphia, was graduated from Princeton University and The Jefferson Medical College Class of 1927. He is the son of Dr. John H. Gibbon, Emeritus Professor of Surgery at The Jefferson Medical College.

The Annual Alpha Omega Alpha Lecture at The Jefferson Medical College was held on January 16, 1946. It was given by Eugene M. Landis, M. D., George Higginson Professor of Physiology, Harvard Medical College on "Venous Pressure and Cardiac Failure in the Laboratory and Clinic."

Married.

Captain Horace A. Albertson, MC., AUS., Richmond, and Mrs. Marie Patterson Van Antwerp, Berkeley, California. The wedding took place recently at Fort Shafter, Honolulu. Dr. Albertson is a graduate of the Medical College of Virginia, class of March 1943.

The Gill Memorial Eye, Ear and Throat Hospital,

Roanoke, will hold its Nineteenth Annual Spring Graduate Course in Opthalmology, Otology, Rhinology, Laryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy, April 1st to 6th. Members of the Guest Faculty are: Drs. Louis H. Clerf, Philadelphia; William R. Graham, Richmond; George P. Guibor, Chicago; William F. Hughes, Jr., Baltimore; Rudolph J. Jaeger, Philadelphia; Merrill J. King, Boston; F. Philip Koch, New York; Perrin H. Long, Baltimore; James H. Maxwell, Ann Arbor; Paul M. Moore, Jr., Cleveland; Werner Mueller, Boston; Frank Payne, New York; Charles A. Perera, New York; Edmund B. Spaeth, Philadelphia; Selman A. Waksman, New Brunswick; and Vice Admiral Ross T. McIntire, Washington.

All lectures, demonstrations and operations will be given at the hospital, and round table discussions will be held at the Patrick Henry Hotel immediately following luncheon.

Dr. Frederick B. Mandeville,

Who resigned as director of the Medical College of Virginia X-Ray Department last fall to accept a position in Baltimore, will return to his former position on April 1st. He is now director of x-ray in the Baltimore Hospital and associate professor of radiology at the University of Maryland.

Richmond Venereal Disease Control Officer.

Dr. Edward V. Jones, Jr., has recently become director of venereal disease control for the Richmond Health Department. He took over the duties of Dr. Carleton H. Waters who has been transferred by the USPHS to Norfolk where he will have charge of the rapid treatment center for venereal diseases. Dr. Jones is a native of Newport News and a graduate of the University of Virginia. He has recently been released from service in the Army of the United States.

Dr. Charles L. Savage,

Formerly of Ashland, but for the past several years located at Penns Grove, New Jersey, is now medical supervisor of the E. I. DuPont de Nemours and Company plant at Waynesboro.

Dr. Savage has recently passed the examinations for the American Board of Internal Medicine and has been elected as associate in the American College of Physicians.

Dr. Carter R. Rowe,

Recently of Fredericksburg, is now located at 262 Beacon Street, Boston, where he will limit his practice to orthopedic surgery. He is a graduate of Harvard Medical School in 1933 and in November was released from the Service, having served for three and a half years with the 105th General Hospital in the Southwest Pacific area.

Dr. R. D. Garcin, Sr.,

Richmond, has been elected to the Board of Directors of the Bank of Commerce and Trusts, this being his 34th year of service.

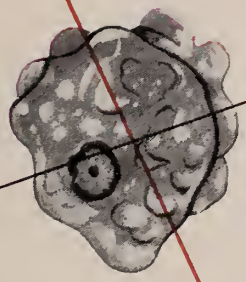
Mental Hygiene Society.

At the annual meeting of this Society, held in Richmond on February 20th, the following officers were elected: President, Mr. William Shands Meacham, Richmond; vice-president, Dr. James K. Blalock, Marion; secretary, Mrs. Donna Banting Bemiss, Richmond; and treasurer, Mr. Harold I. Baumes, Richmond.

Veterans Administration Needs Doctors.

A call for doctors, dentists and nurses interested in positions with the Veterans Administration has

in amebiasis:



symptomatic . . . asymptomatic

Barr[1] states: ". . . it is just as important to treat properly the symptomless 'carrier' of this parasite as to treat the patient suffering from amebic dysentery."

Stitt, Clough and Clough[2] report, "The disease may be symptomless . . . These mild or symptomless cases have been shown to outnumber greatly the cases with clinical dysentery. They constitute the carriers or 'cyst-passers'."

DIODOQUIN (5, 7-diiodo-8-hydroxyquinoline) is safe to use even in suspected cases of amebiasis. Nonirritating, nontoxic—Diodoquin has been found promptly destructive to protozoa in amebiasis and Trichomonas hominis (intestinalis).

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1. *Barr, D. P.: Modern Medical Therapy in General Practice, 2:1830, Baltimore, Williams & Wilkins Company, 1940.*
2. *Stitt, E. R.; Clough, P. W., and Clough, M. C.: Practical Bacteriology, Haematology and Animal Parasitology, ed. 9, Philadelphia, P. Blakiston's Son & Co., 1938, pp. 410-412.*

SEARLE *Research in the Service of Medicine*

been issued by Dr. W. R. Southward, Acting Medical Director of the Richmond Branch Office of VA. He added that there were openings also for dietitians, physiotherapists and administrative officers.

The positions now open are VA offices, hospitals and homes in Virginia, Maryland, West Virginia and North Carolina. For further details, those interested should write or see Dr. Southward at 900 North Lombardy Street, Richmond, Virginia.

Under legislation which became effective recently, salaries for doctors will range from $3,640 to $9,800; for dentists, from $3,640 to $8,225, and for nurses, from $2,320 to $6,020.

The new law removes doctors and other professional employees from Civil Service jurisdiction and gives VA complete supervision instead through the establishment of appointment, promotion and disciplinary boards. Residencies will be set up in VA hospitals where younger doctors may study to qualify as specialists, and promotions henceforth will be made on recommendations of special VA boards comparable with the "selection boards" operating in the Army and Navy for higher ranking officers.

"Close association with medical associations and teaching centers will assure modern scientific medicine in VA establishments," said Dr. Southward. "Service with VA offers professional opportunities comparable with the best."

Dr. J. T. Ransone,

Formerly of Salem, is now taking post-graduate work at the Neurological Institute in New York.

Southeastern Allergy Association.

The first meeting of this Association will be held at the Atlanta-Biltmore Hotel, Atlanta, Georgia, on March 30th and 31st. An interesting program has been planned and the meeting is open to everyone interested in allergy regardless of the type practice one has.

Further information may be obtained from the secretary, Dr. Katharine Baylis MacInnis, 1515 Bull Street, Columbia, South Carolina.

Dr. Joseph M. Barker,

Arlington, is temporarily located at University Hospital, Ann Arbor, Michigan, where he is pursuing a Research Fellowship in Cardiology.

Pennsylvania Academy of Ophthalmology and Otolaryngology.

The annual two-day meeting will be held at Marion Golf Club outside of Philadelphia, April 24 and 25. For detailed information, address Paul C. Craig, M.D., 232 North Fifth Street, Reading, Pennsylvania.

Dr. William Russell Jones, Jr.,

Richmond, is at the Union Memorial Hospital, Baltimore, where he is serving as assistant resident in surgery. He is a graduate of the Medical College of Virginia, class of 1941, and has recently been released from service in the Army Medical Corps.

The American Association for the Study of Goiter

Will hold its annual meeting at the Drake Hotel, Chicago, June 20-22. Members who desire to read papers should send titles at once to the Chairman, Dr. S. F. Haines, Mayo Clinic, Rochester, Minnesota. The Committee is planning a full and interesting program with special features, such as a paper on radioactive isotopes in relation to the investigation and treatment of thyroid disease. There will be papers discussing the use and danger of Thiouracil in toxic goiter and on many other phases of thyroid disease.

Further information may be obtained from Dr. T. C. Davison, Corresponding Secretary, 207 Doctors Building, Atlanta 3, Georgia.

Mr. Joe W. Savage,

Formerly executive secretary of the West Virginia Medical Association, has been appointed executive director of the National Foundation for Infantile Paralysis. He was recently discharged from the Army Air Force with the rank of Major.

Wanted.

Laboratory technician for small hospital. For particulars write care of P. O. Box 146, Suffolk, Virginia. (*Adv.*)

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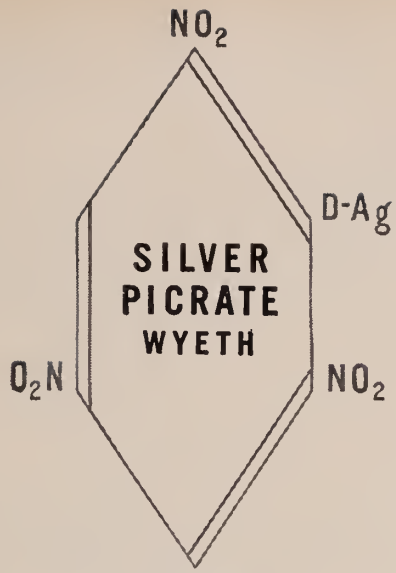

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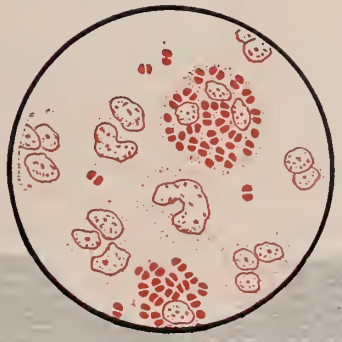

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Obituaries

Dr. Henry Magruder DeJarnette,

Well known physician of Fredericksburg, died February 18th, at the age of seventy-two. He was a graduate of the former University College of Medicine, Richmond, in 1897, and specialized in eye, ear, nose and throat work. Dr. DeJarnette had practiced at Fredericksburg for more than forty years. He had been a member of the Medical Society of Virginia for forty-three years. Four sisters and two brothers, one of them Dr. J. S. DeJarnette, Staunton, survive him.

Dr. Ashby Turner,

Harrisonburg, died November 16, 1945. He was sixty-eight years of age and graduated from the former University College of Medicine, Richmond, in 1900. Dr. Turner had been a member of the Medical Society of Virginia for more than thirty years. His wife survives him.

Dr. Charles William Rodgers, Jr.,

Alexandria, died October 9th of subarachnoid hemorrhage and broncho-pneumonia. He was forty-one years of age and a graduate in medicine from the University of Virginia, class of 1930. Dr. Rodgers was at one time located in Staunton where he served as health officer and on the staff of the King's Daughters' Hospital. He had been a member of the Medical Society of Virginia for ten years.

Dr. Ossie Alexander Weatherly,

Bluefield, West Virginia, died November 27, 1945. He was sixty-eight years of age and a graduate of the former Baltimore Medical College in 1909. Dr. Weatherly had been a member of the Medical Society of Virginia for thirty-five years.

Dr. Carl Clifford White,

Well-known physician of Mathews, died February 3rd, having been in ill health for several months. He was seventy-four years of age and graduated from the Baltimore Medical College in 1897. Dr. White had practiced in Mathews County for more than forty-five years and was secretary of the County Board of Health. He was formerly a member of the Medical Society of Virginia.

Captain Robert Barnes Ware,

Lynchburg, was killed in action in France June 6, 1944. He was twenty-nine years of age and a graduate of the Medical College of Virginia in 1940.

Dr. Claiborne Willcox.

The Norfolk County Medical Society records with deep sorrow the death of one of its most beloved members, Dr. Claiborne Willcox.

A past president of the Society, for many years he had been a valuable member, a regular attendant at its meetings, and a staunch upholder of the principles and practices which have made it always a progressive, deliberative body of great value to its members and to the community which it strives to serve.

A perfect gentleman in all of his personal and professional contacts, he exemplified those characteristics which endeared him to his patients and to his professional associates.

Born in Norfolk in 1890 and educated in the public and private schools of the city and at Bellevue Academy at Bedford, Virginia. He attended the academic school of the University of Virginia and was graduated from its medical department in June, 1915, served an internship in the New Rochelle Hospital, New York, and later a pediatric service in the New York Nursery and Child Hospital. He served as Regimental Surgeon to the 604th Engineers during World War I at the termination of which he returned to Norfolk and began the practice of pediatrics in which he attained an outstanding reputation in Virginia and North Carolina.

In addition to rendering his clientele a highly scientific service he was eminently successful in attaining and keeping the confidence and affection of the children whom he served.

Throughout his busy professional career he was always an ardent sportsman and to the very end of his life he found his chief recreation hunting afield with dog and gun.

During his whole professional career he headed pediatric services at both St. Vincents and Norfolk General Hospitals.

Dr. Willcox will be greatly missed by his friends, both in and out of the profession, but his gracious memory will remain with those who knew him well and who, in knowing him, felt the kindly influence of his friendship.

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THE N.Y. ACADEMY OF MEDICINE
APR 13 1946

Virginia MEDICAL MONTHLY

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

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Annual Meeting
Medical Society of Virginia
Virginia Beach—October 14, 15, 16

April 1946

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Virginia Medical Monthly

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Guest Editorial

Immediate Activitiy of the Medical Society of Virginia

IT seems to me that unless something definite is developed on the part of the medical profession which will awaken the doctors in the State from their present apparent state of complacency, we are destined for a violent awakening and possibly a revolution to a degree in our system of the private practice of medicine. This opinion is expressed after considerable thought and after having had the privilege to discuss our problems in detail with representatives of the Central Atlantic States at a Sectional Meeting held in Philadelphia during the month of January.

There is proposed legislation pending in the Congress at Washington with strong political backing which, if passed by Congress, will definitely regiment the private practice of medicine in Virginia and every other State in the Union. It is suggested that because of other more pressing issues these bills may not be enacted into laws. It is, however, a freely expressed opinion among doctors who are concerning themselves with these problems that, even granting that this legislation may not be passed now, the stage is all set to attempt to gain control of the practice of medicine by further legislation which will be consistently proposed.

I feel that the time has arrived when we should make a proper effort to evaluate honestly our problems as they exist today. Few of us will defend our present system of practice as being perfect. It obviously has some weaknesses. We cannot deny that there are people in our country who do not and cannot get proper medical care. As long as this situation exists our antagonists have a strong talking point. The faulty distribution of medical care creates a situation which makes us vulnerable to criticism. Certain rural people in our State cannot get medical care and, if such care could be obtained, it would be at such a great expense as to make it practically prohibitive. A Commission created by our Legislature surveyed this problem during the past year. A report was made to the Legislative Committee, which, if accepted, will at least make a start towards encouraging young doctors to locate in rural communities. It will also insure a more adequate and reasonable medical care for our country people.

The American Medical Association has been criticized by us because that body has suggested no positive progressive plan for a united medical effort to meet our urgent problems. Within recent months the Council of the American Medical Association has indicated a very positive position in this matter and a fourteen-point plan has been produced to cover a united effort on the part of American medicine. Much will be heard about these plans as proposed by the American Medical Association and it certainly will behoove us to give these suggestions careful thought and undivided support if we believe that they are rational.

It is generally agreed that every State should be well covered by a voluntary medical

care insurance plan. These plans should not only be supported by the medical profession, but they are more effective when created by the State organization and operated under their direction. I feel that the time has passed when we can safely delegate this vital part of our work to outsiders. These plans should be so constructed as to be offered as a coverage to all groups of our people who want coverage or who for any reason cannot get medical care. It is urgently felt that these plans should be so widespread in their coverage as to be made available to the mass of the people in this country who are unable to obtain proper medical care under our present system. The effectiveness of these voluntary insurance plans is exemplified by the operation of effective plans in New Jersey, Michigan and many other states.

I feel that one of our outstanding needs in Virginia today is the necessity of having a vigorous representative to convey to the public the interest and objectives of organized medicine. At the winter meeting of the Council of Medical Society of Virginia, a plan was presented and adopted by the Council to employ a Director for this work. A reasonable budget was established by the Council to carry out this new activity. The Council further authorized the Public Relations and Medical Service Committee to make this selection. The Committee, after interviewing a number of fine candidates, selected Mr. Henry S. Johnson, who is at present a member of the Virginia Legislature representing Fluvanna, Goochland and Louisa Counties, to assume this responsibility, and he has accepted the position. His duties began on March the 15th. It will, of course, require some time for the Director to familiarize himself with all of the duties of this new position. It is planned that he shall visit the various progressive States which have this plan in operation and familiarize himself thoroughly with the outline of the duties of such a position. He will need vigorous support on the part of the medical profession in Virginia to make his work useful. It is hoped that the doctors in the State will give him this support which is so essential.

In the creation of this new position it is understood that the present duties of the personnel in the office of the Medical Society of Virginia will not in any way be interfered with. In all likelihood their duties will be increased as a result of the activities in this newly created position.

Doctors, as a whole, are notoriously negligent in their interest in establishing a proper protection for themselves and their interests. I do not believe that we have properly evaluated the immediate function which our State organization can fulfill for us in these uncertain times. When we consider how little has been our contribution for maintenance through dues for our State Society we must conclude that we could not have expected very much effectiveness from the Society. I know of no way in which we could buy a better protection for ourselves and our interests than by the creation of a sufficient fund in our State organization to insure a proper representation of our interests at all times. This fund will, of course, have to be built around a material increase of our membership dues to the Medical Society of Virginia. Other States have recognized this necessity years ago and our dues are not comparable to the dues of most State organizations.

It is my sincere belief that the welfare of our profession in Virginia is in jeopardy and I think we can afford to give all of the problems of organized medicine our sincere and reasonable support.

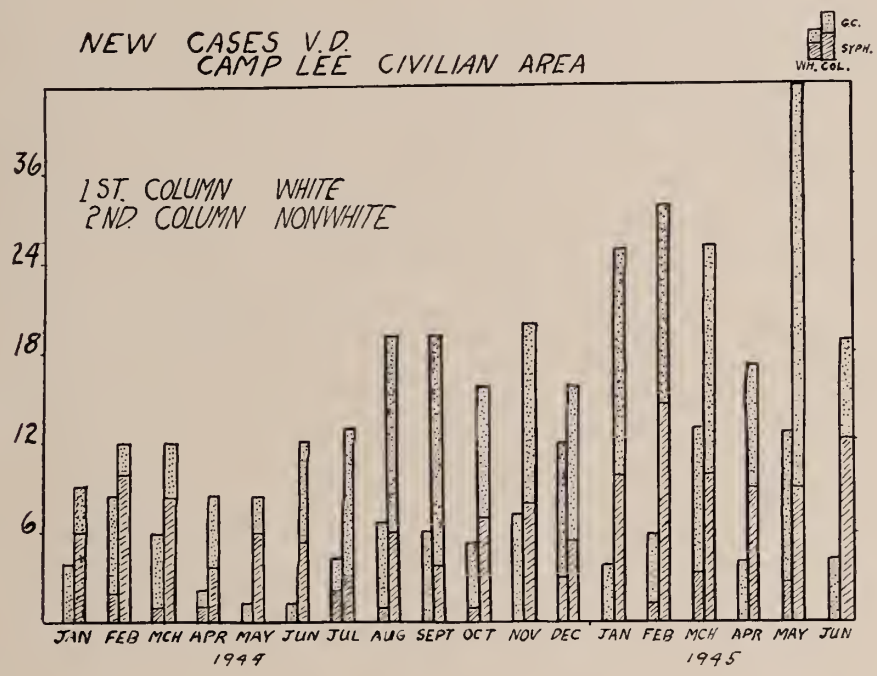
J. M. EMMETT, M.D., *Chairman,*
Public Relations and Medical Service Committee,
Medical Society of Virginia.

VENEREAL DISEASE AS SOLDIERS RETURN

MASON ROMAINE, M.D.,
Health Officer, City of Petersburg,
and
W. E. CHAPIN, M.D.,
Venereal Disease Control, Camp Lee Area,
Petersburg, Virginia.

Carrying on a study started in 1942 of venereal disease in Selective Service rejectees (VA. MED. MONTHLY, 70:46, 1943), we now come to another milestone as the soldiers return and are discharged. Since that time the army has taken in a great number of venereal disease cases and given them treatment. At present their avowed policy is not to discharge any personnel until treated past infectiousness. With the large amount of time and money spent on the control of these diseases, the continuance of which is questionable, it is time to come to some conclusions from the facts already obtained. We are therefore reviewing in a small community near a large army camp venereal disease morbidity. Petersburg has a population of approximately 35,000, with 20,000 white and 15,000 nonwhite. It drains typical sized Virginia counties, Dinwiddie, Prince George, and part of Chesterfield. The greater part of Chesterfield drains into the larger city of Richmond nearby.

During the past eighteen months (January '44-July '45) the inflow of trainees has diminished and the number of discharges has increased in more ways than one. The figures in a local civilian clinic show by months a remarkable increase in gonorrhea, with only a slight upward trend in syphilis. The small number of chancroid and granuloma cases are included for purposes of this study with the gonorrhea figures.



Inferences from this chart are: (1) The outstanding high incidence in the colored race. If the figures were weighed according to population they would be even higher. This is universally true as a recent report from the U. S. Public Health Service shows admission to rapid treatment center to date of 34 per cent white and 64 per cent nonwhite. (2) There is no let up in the number of infections. (3) Infections still occur at the age when promiscuous sexual intercourse is most common. It is now a well recognized fact that promiscuous sexual intercourse is the common origin of venereal disease. There is hardly any use to hush-hush this fact or pretend

that it is not so, as seems to be the attitude of some bodies, especially Church convocations. Knowing the class of people, their age, and the common origin of venereal disease, plus a fair knowledge of how to treat and prevent, it would now seem that we ought to be coming to some workable conclusions.

Any such problem presents a divided responsibility. Unless we can all combine in attacking, our efforts are halting to say the least. Public opinion, the schools, health department, courts, police, church and all interested social agencies have a definite duty. The health department is more than willing to cooperate with all these agencies, and already drives are being made to get public opinion on our side. Next come schools. Public schools have an avowed interest in a general health program. Some states are already passing acts whereby all school districts shall provide health instruction and physical education (i.e., Oregon State House Bill No. 53). But with the present feeling it hardly seems necessary until public opinion is plainly on our side. Under any such general program, a survey of the conditions will rapidly confirm what our figures show: that nonwhite children finishing school are almost immediately infected with venereal disease in entirely too high a percentage of cases. It doesn't make any difference what you teach, if the child is going to die of syphilis of the brain or heart. We owe to every such child in the secondary schools of this State that they do not leave school before they are well acquainted with the following simple facts:

What is venereal disease?
Who has it?
How you get it?
How you get well?
How you keep from getting it?

We like a simple plan. We have tried it with patients and their contacts with these diseases. It clarifies the facts in their minds. This might be a final test for older school children, while the information could be given in the form of graphs, history of blindness, figures of morbidity and from insane asylums. This may be done by brief selected articles on the principal venereal diseases (*Health Bulletin, Va. State Health Dept.*, 9, July, 1945) or discussion groups led by a guidance leader, as well as by a number of other routes.

In conclusion, in venereal disease we are faced with the fact that, if they trust moral laws, "they shall indeed know the truth, and the truth shall make them free". Still, how are they to trust, if they have not believed? How are they to believe if they have never heard? How are they to hear unless someone teaches them? And how are men to teach unless they are sent to do it?

Floral Eponym (37)

DRAKEBROCKMANIA

LIEUTENANT-COLONEL RALPH EVELYN DRAKE-BROCKMAN, D.S.O. 1875—

Colonel Drake-Brockman was born in England in 1875. He specialized in tropical diseases and served as Medical Officer to the troops in the interior of Somaliland from 1904 to 1915, including three campaigns against the Mad Mullah. In World War I he commanded the 150th and 95th British Field Ambulances. There is a genus of grass named for him and in 1937 Alaine White and Boyd L. Sloane erected the genus Drakebrockmania in the milk weed family for him.

BIOLOGIC FALSE POSITIVE SEROLOGIC TESTS FOR SYPHILIS: A STUDY OF 100 CASES

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In recent years the widespread use of serologic tests for syphilis premaritally as well as in the testing of many thousands of civilian blood donors has focused attention on the importance of detecting biologic false positive serologic tests for syphilis.

Many diseases are known to produce biologic false positive serologic tests for syphilis.[1] Yaws, malaria, pinta,[2] leprosy,[3] infectious mononucleosis, and virus pneumonia produce a high percentage of these false positive tests. Kolmer[1] lists 30 other causes, including upper respiratory infections, active tuberculosis, rheumatic fever, diabetes mellitus, rat-bite fever, psoriasis, leukemia, coronary thrombosis and eclampsia.

Favorite[4] called attention to the occurrence of this phenomenon in smallpox vaccination (vaccinia) describing false positive reactions by the Kolmer, Kahn or Mazzini tests for syphilis in 11.8 per cent of 202 subjects after smallpox vaccination. One of us (L. H.[5]) reported 8 cases of tetanus toxoid inoculations producing false positive Kahn tests.

Eagle[6] in 1941 found biologic false positive serologic tests for syphilis in 1 out of 4,000 normal individuals. In the same year Moore, Eagle and Mohr reported nine normal individuals in whom biologic false positive serologic tests for syphilis were found and suggested a method of clinical study of such cases.[7]

This report covers 100 patients at a Station Hospital observed during the period May, 1943-January, 1945, who exhibited doubtful or positive serologic tests for syphilis (see Table I). Ninety-nine were soldiers and one was a civilian. In 92 instances, the original doubtful or positive test was detected when the routine serologic test for syphilis was performed on the hospitalized patient, while eight instances of false positives were revealed at the time of a premarital blood test. In all cases, as soon as a doubtful or positive test was obtained for the first time, the patient was seen by the Venereal Disease Control Officer who obtained a complete history and performed a physical examination to rule out the presence of syphilis. None of the individuals in this series received any anti-luetic therapy either before or after coming under observation.

In 13 of these 100 patients, it was possible to make a complete examination (including serologic test for syphilis) of the marital or sexual partner and no evidence of syphilis was found. All of the tests were performed in the Station Hospital laboratory which is checked for accuracy at frequent intervals

TABLE I

	No. of Cases	Average No. of days required for tests to become negative following the first doubtful or positive test: Kahn	Wassermann
Group A—*Those caused by Diseases*			
1. *Respiratory Diseases*			
a. Nasopharyngitis	20	19.3	16.
b. Primary Atypical Pneumonia	8	40.37	33.4
c Lobar Pneumonia	3	26.33	5.
d. Tonsillitis	4	21.	3.
e. Bronchitis	2	49.5	---
f. Laryngitis	2	14.	---
g. Sinusitis	1	8.	---
Total	40		
2. *Infectious Diseases*			
a. Measles	2	23.	---
b. Mumps	5	21.2	18.
c. Chicken Pox	1	21.	---
d. Infectious Mononucleosis	1	6.	---
Total	9		
3. *Other Febrile Diseases*			
a. Malaria	20	12.75	8.8
b. Adenitis	1	47.	43.
c. Lymphopathia Venereum	1	13.	---
Total	22		

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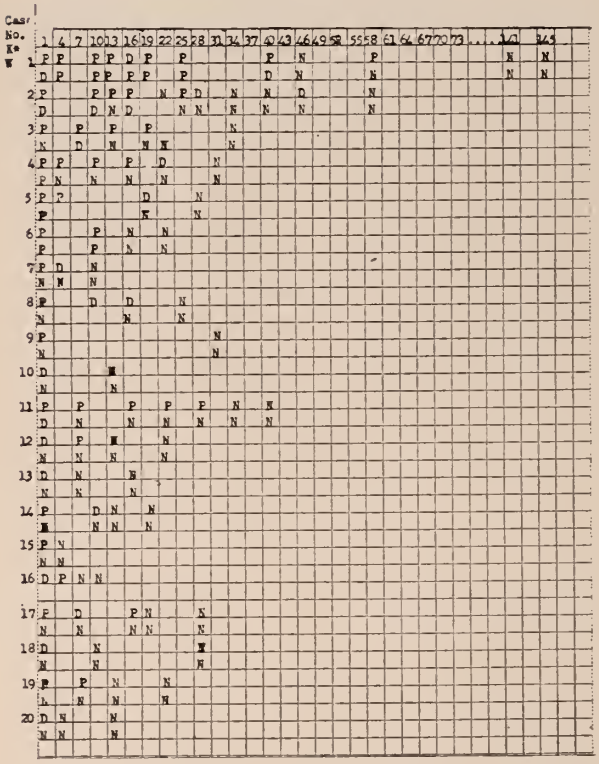
Group B—*Those caused by Recent Immunizations*

1. Tetanus Toxoid	17	23.58	---
2. Smallpox Vaccination	2	13.	---
3. Combination (Tetanus Toxoid and Smallpox)	10	12.4	5.
Total	29		
GRAND TOTAL CASES	100		

by the Division of Serology, Army Medical School, Army Medical Center, Washington, D. C. In addition, many corroborative tests* were performed on samples sent to the Army Medical School on cases listed in this series. The blood tests (both Kahn and Wassermann) in these 100 cases were repeated at intervals (see Tables II, III, and IV) until both the Kahn and Wassermann became negative.

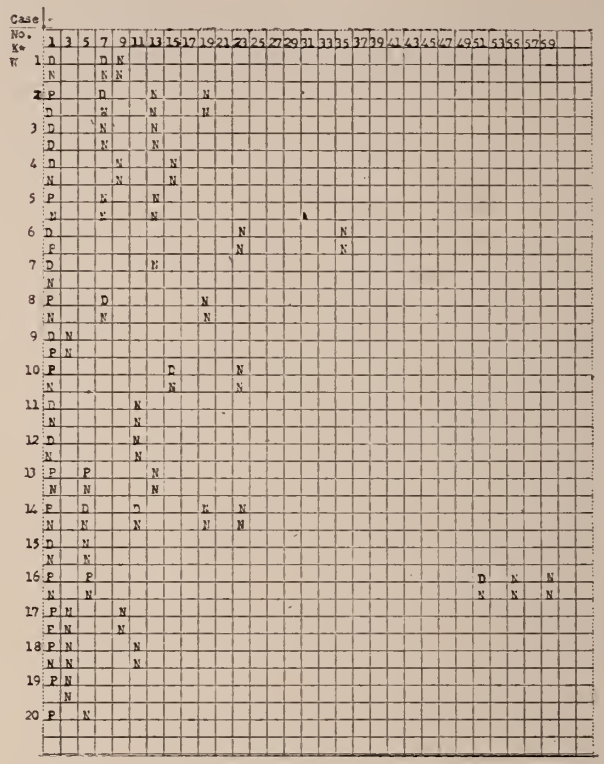
The period of time between the finding of doubtful or positive tests and the return to negativity varied to a great degree. The average number of days required for the blood test to change from positive to negative have been listed in Table I. Some cases required 30 or more days to become negative (see Table II, Cases 1 and 11) while others changed from positive to negative within a matter of ten or twenty days (see Table II, Cases 6, 7, and 14). There are several reasons why no definite conclusions can be drawn from these figures:—(1) It was impossible to determine the length of time the test had been positive prior to its first detection on routine examination. (2) The original positive or doubtful blood test was obtained routinely at a varying length of time after the patient was first taken sick. (3) The time interval between blood tests in the different individuals varied widely. In some cases, tests were performed every three or four days; in others, there were intervals of weeks between tests. It was obviously impossible to arrive at accurate figures for incidence of these biologic false positive tests in the different conditions listed

TABLE II—NASOPHARYNGITIS
Days following initial doubtful or positive tests.



*The results of the serologic tests (top line—Kahn, bottom line—Wass.) are reproduced opposite the number of each case.

TABLE III—MALARIA
Days following initial doubtful or positive test.



*The results of the serologic tests (top line—Kahn, bottom line, Wass.) are reproduced opposite the number of each case.

*In 22 instances, samples of blood taken at the same time were tested by the Division of Serology, Army Medical School, and our results were confirmed in all except one case in which our laboratory reported Kahn doubtful, Wassermann positive, while the Army Medical School found Kahn positive, Wassermann positive.

among these 100 cases. Thousands of soldiers were immunized but only a small proportion of these had serologic tests made. In the hospitalized cases (respiratory diseases, malaria, mumps, etc.) if the first routine serologic test (Kahn) was negative, it was not repeated and therefore some cases were missed in which the reagin titer had not risen sufficiently at the time to produce a doubtful or positive test.

In the several instances in which Kahn quantitative tests were performed the reagin titer was found to be below 100 units.

Loveman[13] stated that fluctuating stages of positivity and negativity are rarely seen in false positive reactors. Rein[14] disagreed, stating that "it is not uncommon to observe fluctuations of serologic titer in false positive reactors". Eleven cases in this series (11.0 per cent) showed fluctuations in their reaction (see Table V).

TABLE IV—TETANUS TOXOID INOCULATIONS
Days following initial doubtful or positive test.

Case No.*	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	....	68	80	102	113
K 1	P			P																N	N		N									
W 1																																
2	F		D											N							N											
			N																													
3	D		N																													
	N		N																													
4	P		D							N						N																
	N									N																						
5	P		N			N																										
	N		N			N																										
6	P	P			N			N																								
	N	N																														
7	D		D					N							N																	
															N																	
8	P			P		P	P								P										P				D	N	N	
	N			N			N								N										N				N	N	N	
9	P				N																											
	N																															
10	D												N																			
11	P			P						N				N												N						
12	P				P			D							P									N								
					N																			N								
13	P			P								N									N											
	N			N																												
14	D		N																													
	N		N																													
15	P		N																													
16	D				D				D				N			D							N			N						
	N				N				N				N			N							N			N						
17	P							P			P	D		N					N													
	N							N			N	N																				

*The results of the serologic tests (top line—Kahn, bottom line, Wass.) are reproduced opposite the number of each case.

The 100 cases have been arbitrarily divided into two groups:

Group A—Those Caused by Diseases.

Group B—Those Caused by Immunizations.

TABLE V
FLUCTUATIONS

		Kahns
1.	Nasopharyngitis	P D P P N P N
2.	Nasopharyngitis	P N P D N D N
3.	Primary Atypical Pneumonia	P D P P D D N
4.	Primary Atypical Pneumonia	P P P D P N
5.	Bronchitis	D P D P N
6.	Bronchitis	P D D P N
7.	Adenitis	P N P N D N P N
8.	Tetanus Toxoid	P D P N
9.	Combination; Tetanus Toxoid and Smallpox Vaccination	P P P P N D N
		Wassermann
10.	Nasopharyngitis	D D N D N
11.	Combination; Tetanus Toxoid and Smallpox Vaccination	N D N N N N N

Group A is further subdivided into Respiratory Diseases, Infectious Diseases and Other Febrile Diseases.

Group A—*Those Caused by Diseases.*

1. *Respiratory Diseases.*

This group comprised 40 cases, including 20 cases nasopharyngitis (see Table II), 8 primary atypical pneumonia, 3 lobar pneumonia, 4 tonsillitis, 2 bronchitis, 2 laryngitis, and 1 sinusitis.

a. *Nasopharyngitis.*

Although there are many references in the literature concerning the occurrence of biologic false positive serologic tests for syphilis in febrile diseases there are no reports, as far as the authors know, in which this phenomenon is described in nasopharyngitis *per se.* The importance of such a benign yet widespread condition as nasopharyngitis (common cold) causing false positive tests is obvious. Its occurrence in twenty of these one hundred cases may cause one to speculate on the possibility that the common cold might have been the etiological agent in many cases reported in the literature. For example, Kolmer[1] lists, among others, the following conditions in which may be found false positive reactions:—rheumatic fever, leukemia, pellagra, psoriasis, coronary thrombosis, diabetes mellitus, eclampsia, lead poisoning, acute alcoholism, ether anesthesia, sulfonamide therapy and serum therapy. Is it not possible that in many of the above named conditions, the presence of a concomitant common cold might have been the cause of the biologic false positive serologic tests?

b. *Primary Atypical Pneumonia.*

The following case illustrates the typical series of events encountered in the group of virus pneumonias.

A 34-year-old white soldier was admitted to the hospital with a history of having had gradual onset of a severe upper respiratory infection for seven days prior to admission, with a hoarse, non-productive cough, sore throat, and some chest pain on the right side. Physical examination on admission revealed an inflamed throat, dullness to percussion and medium moist rales in the right lower chest posteriorly. An X-ray of the chest confirmed the clinical findings of primary atypical pneumonia in the right lower lobe. The serologic tests are listed below:

Hospital Days	1	7	19	21	27	35	43	51	56	61
Kahn	P	P	D	P	P	D	D	N	N	N
Wassermann		P	P	P	P	P	P	P		N

2. *Infectious Diseases.*

This group included 2 cases of measles, 5 of mumps, and 1 each of chicken-pox and infectious mononucleosis.

a. *Infectious Mononucleosis.*

Kolmer[1] in a review of the literature has found the incidence of false positive reactions in infectious mononucleosis varying from none to 100 per cent with an average of 7.3 per cent doubtful or positive complement-fixation reactions in 202 cases and 9.6 per cent doubtful or positive flocculation reactions in 157 cases. One patient (5.3 per cent) of a series of 19 soldiers with infectious mononucleosis seen at this hospital during the past 18 months demonstrated biologic false positive serologic tests for syphilis using the Kahn flocculation test.

3. *Other Febrile Diseases.*

This group comprised 20 cases of malaria (see Table I), and one each of adenitis and lymphopathia venereum.

a. *Malaria.*

Rosenberg[8] called attention to a pattern of positivity of serologic tests in malaria strongly suggestive of biologic false positive. He finds that in malaria positive Kahn and Mazzini tests, doubtful Kolmer and Kline tests, and negative Eagle and Hinton tests can usually be differentiated from that pattern of tests found in syphilis.

In the 20 cases of recurrent vivax malaria (see Table III) all had doubtful or positive Kahns while five were found to show either a doubtful or positive Wassermann. Rosenberg quoted figures from the literature showing percentages of complement-fixation tests ranging from 8.6 to 20.6 per cent.

Potter[15] and his co-workers found 12. per cent positive reactions (using Kahn and Wassermann tests) and 10. per cent doubtful reactions among 100 consecutive recurrent malaria cases. Within thirty days all of these positive and doubtful reactions had become negative. This parallels the return to negative in the 20 cases of malaria in this series (see Table III) with one exception (Case 16).

b. *Adenitis.*

Cases of inguinal adenitis with fever and positive serologic tests might easily tempt the physician to make a diagnosis of syphilis or lymphopathia venereum. This emphasizes the importance of "watchful waiting" while repeating the serologic tests before beginning anti-luetic therapy.

One of our cases illustrated this point. Frei tests were negative on two occasions and the enlarged inguinal glands did not suppurate. Meanwhile the serologic tests became negative. It was felt that this was a case of non-specific, inguinal adenitis producing a biologic false positive serologic test. It must be kept in mind that lymphopathia venereum may produce a biologic false positive serologic test for syphilis.

Group B—*Those Caused by Recent Immunizations.*

Barnard[9] in 1940 reported the first case of false positive serologic test for syphilis following smallpox vaccination.

Lynch, Boynton and Kimball,[10] using the Kline, Kolmer, Mazzini and Hinton tests, found false doubtful or positive reactions occurring in 16.0 per cent or 263 persons studied after primary vaccinia. Favorite,[4] using the same tests, obtained an incidence of 11.8 per cent in his 202 cases.

In the series reported by Arthur and Hale[11] in which they found 14.8 per cent of 94 soldiers showed false positive tests, the routine Army immunizations included smallpox, typhoid, tetanus and yellow fever and were given within so short a period of time that it is impossible to ascertain which test or tests produced the false positives. Our experience indicates that typhoid and yellow fever immunizations do not cause false positives.

In all three of the above series[4, 10, 11] serologic tests were performed at irregular intervals and in one series[10] many of the cases were tested only on one occasion following vaccination. Had daily tests been performed for two to six weeks, it is very likely

that the percentage of positives would have been considerably higher.

In this series (see Table I) seventeen instances of tetanus toxoid were included (having received no other immunizations or vaccines for two months prior to the tetanus toxoid), two instances of smallpox vaccination (who received no other immunization for two months prior to the vaccination) and ten instances in which the person received both tetanus toxoid and smallpox vaccination the same day or a few days apart. These last ten cases were listed as "combination".

Until recently smallpox vaccinations were thought to be the only commonly used immunizing process which might lead to the production of a biologic false positive serologic test for syphilis. The authors present, in addition to two cases of smallpox vaccination causing biologic false positive serologic tests, 17 cases of this phenomenon produced by immunizations with tetanus toxoid. This is contrary to the findings of Favorite[4] who stated that biologic false positive serologic tests are not found in persons recently immunized with tetanus toxoid. In the 17 cases of tetanus toxoid included in our series, other factors such as nasopharyngitis or other respiratory diseases, the presence of which might also produce a biologic false positive, were excluded. (Only those cases which received tetanus toxoid immunizations alone were included in these 17 cases.) All other cases receiving multiple immunizations such as smallpox and tetanus toxoid at or about the same time were included in a group which we have designated as Combination.

The following case history illustrates the typical transiently positive serologic tests encountered in this group:

CASE 8—TABLE IV

This patient was first seen on February 8, 1944, when he presented himself for a premarital physical examination and blood test. At that time, a positive Kahn and a negative Wassermann were found. History and physical examination were negative for syphilis. Past history revealed that the patient had had a ½ cc. "booster" dose of tetanus toxoid on 1 February 1944. In order to rule out the possibility of asymptomatic neuro-syphilis, a spinal puncture was performed February, 1944, and was found to be completely negative. Blood tests were performed at frequent intervals (see Case 8, Table IV). Dr. Harry Eagle, in Baltimore, found the Kahn positive and the Eagle negative. It was Dr. Eagle's opinion that this was a biologic false positive serologic test. On 17 February 1944, the Army Medical School used a battery of serologic tests (see Table VI). The opinion at that time was that it represented an inconclusive type of reaction. On 22 March 1944, tests at the Army Medical School revealed definite diminution in titer of all the tests and verification of the fact that this was a biologic false type of reaction.

TABLE VI

Case 8—Group IV—Army Medical School Serology Laboratory

Tests	*17 Feb. 1944*	*22 Mar. 1944*
Kline Diagnostic	+ 32 Units	1, 2 Units
Kline Exclusion	+ 64 Units	2 Units
Boerner-Jones Lukens	+ 32 Units	2 Units
Mazzini	+ 32 Units	1 Unit
Kahn	+ 443	Contaminated
Kolmer	+ 3	Negative
Conclusion	Inconclusive type of reaction.	Thought to be biologic false positive.

		17 Feb. 1944
U. S. Public Health Service	Mazzini	Positive
Syphilis Research Center	Wassermann	Positive
Johns Hopkins University	Kahn	Positive
	Eagle	Negative

HOW TO DEAL WITH CASES OF SUSPECTED BIOLOGIC FALSE POSITIVE SEROLOGIC TESTS FOR SYPHILIS

1. Take a careful history for syphilis. Ascertain if there has been any preceding or current upper respiratory infection or recent immunization.

Certain precautions must be taken—familiar terminology must be used. The patient may not be familiar with such terms as chancre, primary "sore", syphilis, lues, positive serology, Wassermann test, "neo", mapharsen, bismuth and anti-luetic therapy. But, on the other hand, he may very well be familiar with such well known synonyms as "bad blood", "hair cut", "hip shots" and "arm shots", "606 shots".

In patients denying anti-luetic therapy, in whom it is suspected that the patient is prevaricating, an X-ray of the soft tissues of the buttocks may reveal the presence of bismuth deposits.

The family and marital histories are most important. Recent sexual exposures under certain condi-

tions may be presumptive evidence in favor of syphilis until proven otherwise.

A history of recent febrile disease with particular attention to malaria, infectious mononucleosis, respiratory tract infections and contagious diseases, as well as other virus diseases would be contributory evidence.

2. Make a careful physical examination.

The physical stigmata of congenital lues must be looked for. Penile scars as well as lymphadenopathy, particularly of the cervical, axillary, inguinal and epitrochlear groups, point strongly to the diagnosis of syphilis.

3. Examine the blood for malaria and infectious mononucleosis by blood smears and heterophile agglutination tests.

Repeated thick smears for malaria must be obtained. Reports in the literature with figures as high as 100 per cent of malaria cases with transiently positive serologic tests for syphilis have been noted. The transiently positive serologic tests for syphilis, seen in malaria cases, may require 2 to 12 weeks to return to negative.

Infectious mononucleosis has been reported to give biologic false positive serologic tests for syphilis in from 4 to 20 per cent of the cases. The Paul-Bunnell heterophile anti-body test (which is positive in 75-80 per cent of the cases of infectious mononucleosis) may help in the differential diagnosis. Quantitative titration of the flocculation test is of value in differentiating syphilis as the cause of the positive serologic test.

4. Repeat the serologic test at intervals and if possible use a quantitative flocculation test as the titer is of diagnostic importance. If these cases are followed by serial complement-fixation and flocculation tests, it will be found that in the biologic false positive cases the titer will be fairly low, usually not exceeding 60-100 units and will show a tendency on repeated tests to become lower in titer pointing towards a negative result. However, in the case of syphilis, the titer may be, and is usually, high in the early stages—often exceeding 100 units or more. In syphilis, the titer tends to rise for a period of many months and remain at high levels of 200-300 units, whereas in the biologic false positive case the titer usually drops to a very low figure (5-50 units) within a period of 2 to 12 weeks.

5. Verification tests. According to Rein and Callender,[12] the verification tests in the serodiagnosis of syphilis are of questionable value and until a reliable verification test is developed such verification procedures should not be used routinely by the average serologist.

SUMMARY

1. One hundred cases of biologic false positive serologic tests for syphilis are listed.

2. The conditions responsible for these false tests may be divided into two major groups: Group A—Those Caused by Diseases (Respiratory, Infectious and Other Febrile Diseases). Group B—Those Caused by Immunizations (Tetanus Toxoid, Smallpox, and Combination of both Tetanus Toxoid and Smallpox Vaccinations).

3. Typical case histories are cited.

4. The importance of recognizing this condition is stressed.

5. Suggested procedures to be followed in dealing with suspected biologic false positive serologic tests for syphilis are listed.

BIBLIOGRAPHY

1. Kolmer, John A.: The Problem of Falsely Doubtful and Positive Reactions in the Serology of Syphilis, *Amer. J. Pub. Health* **34**:510, May, 1944.
2. Stokes, John H., Beerman, Herman, and Ingraham, Norman R., Jr.: Pinta—A Review of Recent Etiologic and Clinical Studies, *Am. J. Med. Sciences* **205**:611, April, 1943.
3. Hopkins, Ralph, and Faget, G. H.: Recent Trends of Leprosy in the U. S., *J.A.M.A.* **126**:941, 1944.
4. Favorite, G. O.: Effects of Smallpox Vaccination (Vaccinia) on Serologic Tests for Syphilis, Proc. Soc. Exper. Biol. & Med. **52**:297, 1943.
5. Heimoff, Leonard L.: Biologic False Positive Serologic Blood Tests Following Stimulating Dose of Tetanus Toxoid, *Military Surgeon* **95**:419, November, 1944.
6. Eagle, H.: On the Specificity of Serologic Tests for Syphilis as Determined in 40,545 Tests in a College Student Population, *Am. J. Syph., Gonor. and Ven. Dis.* **25**:7, 1941.
7. Moore, J. E., Eagle H., and Mohr, C. F.: Biologic False Positive Serologic Tests for Syphilis. III. A Suggested Method of Approach to Their Clinical Study, *J.A.M.A.* **115**:1602, 1940.
8. Rosenberg, Arthur A.: Effect of Malaria on Serologic Tests for Syphilis, *Bulletin of the U. S. Army Medical Department* **84**: January, 1945.
9. Barnard, R. D.: False Positive Serologic Tests for Syphilis Following Vaccination for Variola, *Illinois M. J.* **77**:78, 1940.
10. Lynch, F. W., Boynton, R. E., and Dimball, A. C.: False Positive Serologic Reactions for Syphilis Due

to Smallpox Vaccinations (Vaccinia), *J.A.M.A.* **117**:591, 1941.

11. Arthur, Robert D., and Hale, John M.: Biologic False Positive Tests for Syphilis Associated with Routine Army Immunizations, *Military Surgeon* **92**:53, January, 1943.
12. Rein, Charles R., and Callender, George R.: Verification Tests in Serodiagnosis of Syphilis, *Bulletin of the U. S. Army Medical Dept.* **85**:108, February, 1945.
13. Loveman, A. B.: False Positive Serologic Reactions For Syphilis, *Bulletin of the U. S. Army Medical Dept.* **80**:95, September, 1944.
14. Rein, Charles R.: Quoted by Loveman, A. B.: False Positive Serologic Reactions for Syphilis, *Bulletin of the U. S. Army Medical Dept.* **80**:95, September, 1944.
15. Potter, Harold W., Bronstein, Lewis H., and Gruber, Chas. M.: Blood and Spinal Fluid Tests for Syphilis in Malaria Patients, *J.A.M.A.* **127**:699, 1945.

Journal Condemns New Names for Penicillin Products.

In an editorial titled "Silly Names for Penicillin Products," *The Journal of the American Medical Association* says in its February 2 issue that "leaders in the drug and chemical industries, apparently avid for the kind of profits that can be derived from well-exploited medical specialties, have let their imaginations and their greed run riot in a search for specific trade names to designate some penicillin products."

The editorial says that the name "penicillin," which truly reflects the source of the product, was deliberately chosen as a descriptive title. The modesty of the investigators led them to avoid using their proper names as the title of the product.

"Instead of selling penicillin under its simple and well known name," the editorial says, "they (the manufacturers) have become downright silly and offer penicillin under so many names that only a professional solver of cross-word puzzles could guess the nature of the products that these names conceal."

Some of the new penicillin names which the editorial listed were: Amphocillin, Penioral, Bucillin, Topicillin, Delacillin, Ledercillin-G, and Per-Os-Cillin.

"Some of these are for oral use," *The Journal* says, "some for local application, one is to be mixed 'before taking' with something else. The promulgators of these products and their sale are interested in helping their own pocketbooks by trying to make certain that the prescribing physician will limit himself to their products. One manufacturer naively combines his firm name with 'cillin.' There are more than 20 manufacturers. . . .

"But who could guess that Amphocillin and Bucillin refer to penicillin for oral use? Who can believe that Delacillin is really penicillin calcium in peanut oil and beeswax? You might surmise the nature of Ledercillin-G, but we will lay eight to five that would miss on Penioral. Would you think it useful especially for gonorrhea? Well, that isn't it. Then what about Per-Os-Cillin? Something concerned with an opening, but which one?

"Some day scientific aims and business promotion will be more closely knit. When that day arrives every one will breathe a sigh of relief, including the promoters. Perhaps they will finally realize that a scientific approach gains the confidence of the prospective buyers and really promotes use. Until then, time marches on."

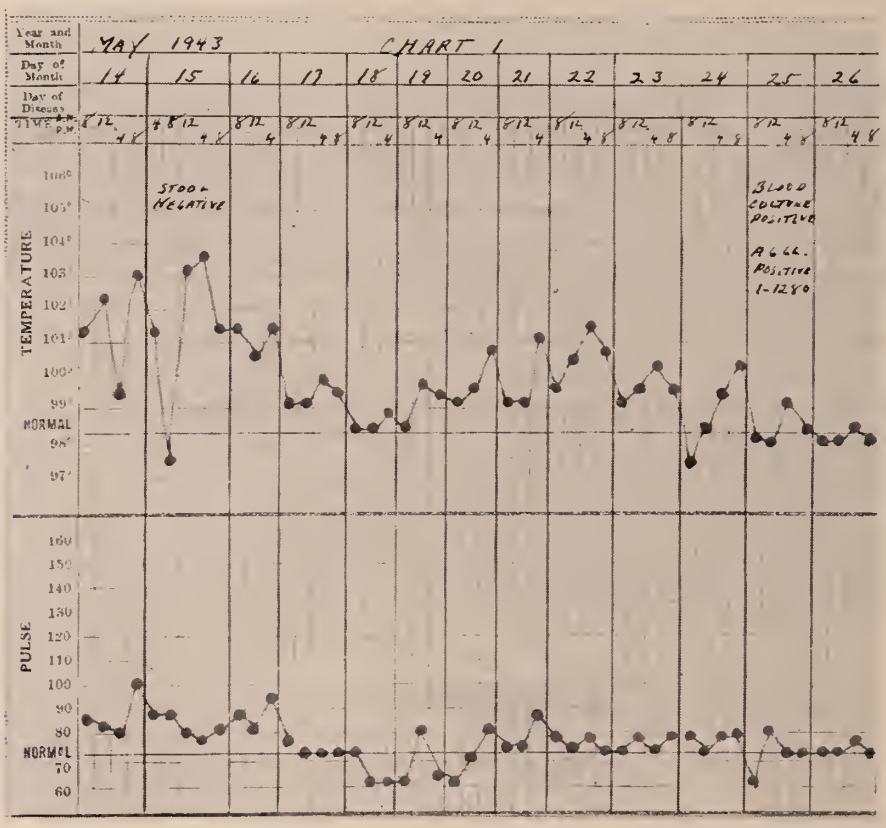
Schering Increases Field Staff.

Schering Corporation of Bloomfield and Union, New Jersey, manufacturers of endocrine and pharmaceutical preparations for the medical profession, recently announced the addition of nine new representatives to its Professional Service Staff. In keeping with the present Schering policy of expansion, the new Professional Service Representatives have been assigned to various territories throughout the country.

A MINOR EPIDEMIC OF SALMONELLA INFECTION*

KINLOCH NELSON, MAJOR, M.C., A.U.S. (Ret.),
Richmond, Virginia.
and
GEORGE E. SNIDER, MAJOR, M.C., A.U.S.

During the day of 13 May, 1943, the Officer of the Day was called to see some forty members of our personnel. Those observed in the late morning and afternoon presented such variable pictures that the true nature of the situation was not at first apparent. By 2100 hours, however, it became clear that we were dealing with a minor epidemic of some type of gastro-intestinal infection.



Case No. I.—13 May during day felt sluggish and tired. Ate usual lunch. Later began to have generalized cramps in abdomen, with 4 or 5 loose watery stools. Ate no supper. About 2200 became chilly, followed by headache and feeling of depression. Temp. 102. Bowels moved naturally during the night. Admitted 14 May at 0930. P.E. Negative. Urine normal. Smear for malaria negative. Stool negative, 15 May. Blood culture positive for Salmonella organism and agglutination 1-1280, 25 May. Note tendency for fever run in two peaks, first the stage of intoxication, second the stage of invasion.

The predominating symptoms and signs were chills or chilliness, fever or feverishness, general malaise, generalized abdominal cramping pain, diarrhea (frequently involuntary), frontal headache, and prostration. Nausea was present in many and vomiting in a good number; several complained only of chills, fever, and malaise; in two, photophobia of annoying degree accompanied the severe frontal headache; two officers were noticeably drowsy and sluggish; an odd complaint in one patient was a feeling of soreness of the jaws and teeth on biting. During the next few days it was necessary to hospitalize thirteen officers, fourteen nurses, and three enlisted men—a total of thirty. A personal interview with all officers, nurses, dietitians, physical therapy aides, Red Cross workers, and selected enlisted men showed that a total of

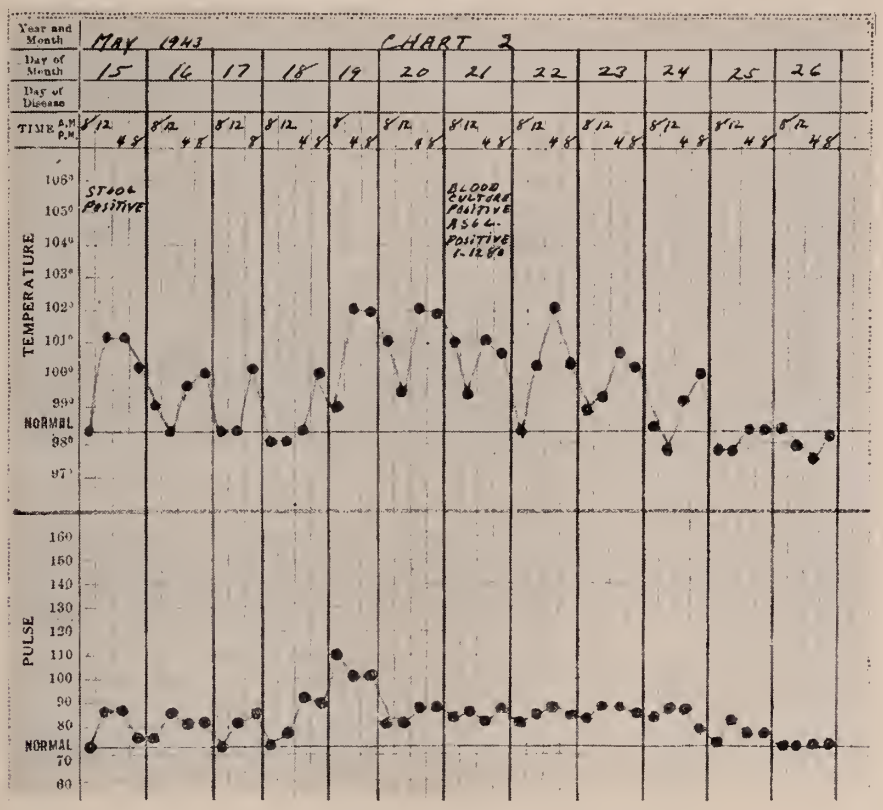
*Report Completed 15 August, 1943.

forty-five were similarly affected to some degree.

On admission the temperature varied from 100° to 104°. Physical examination was negative except for a material degree of drowsiness in several, and generalized abdominal tenderness and gurgling in most cases. One patient had a very definitely palpable hard non-tender spleen on first day of illness. (This remained unchanged throughout his stay in the hospital and during observation for several weeks thereafter.) In the Laboratory the white blood count varied from 5500 to 22000, with 60 to 80 per cent polys. A leukopenia was not recorded. The urine was normal. In two patients X-ray of the chest was negative. Since we did not at first realize the true nature of the problem, bacteriological studies were not made in all cases; in twenty-two so studied, stool culture, blood culture, or blood agglutination tests demonstrated Salmonella oranienburg (see bacteriological section below).

TREATMENT AND COURSE

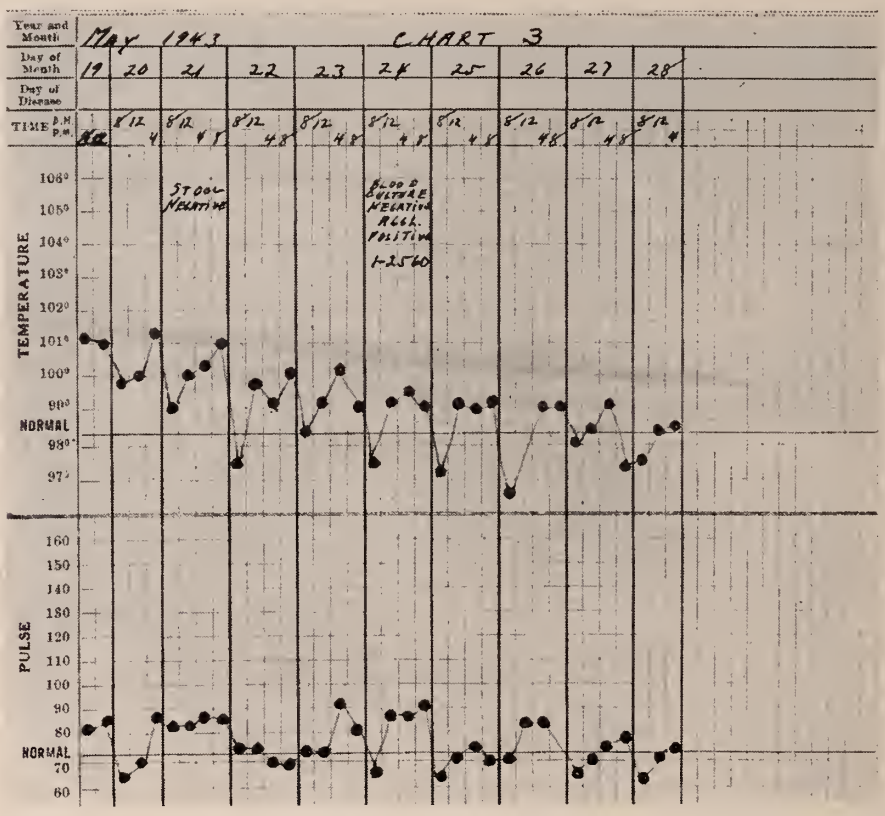
No specific therapy was undertaken routinely. Treatment was symptomatic. One patient received sulfadiazine in full doses under the mistaken diagnosis of lobar pneumonia. This did not seem to affect his course. One case required repeated intravenous fluids because of protracted nausea and vomiting. In general, the course was gradual recovery with temperature falling by lysis. There was a tendency for the temperature to show two peaks in some cases. The average hospital stay was three to five days, one patient requiring seventeen days. The prostration and weakness which followed clinical recovery was very noticeable in the more severe cases, where also there was marked weight loss, a drop of thirty pounds being recorded in one



Case No. II.—13 May in P.M. patient began to have abdominal cramps and profuse watery diarrhea. This continued through night, associated with nausea. 14 May diarrhea persisted, felt weak and tired. Could take only fluids. Became chilly and then feverish. Admitted 15 May at 0830. P.E. negative except for generally tender abdomen with considerable gurgling. WBC 5800, polys. 56, lyms. 40, eos. 4. Smear for malaria negative. X-ray chest negative. Stool culture positive for Salmonella organism. Again note tendency for temperature to run in two peaks. Blood culture positive 21 May. Agglutination 1-1280, May 21.

officer.

A disturbing question was that of the development of the carrier state. During June and July one officer (Case No. VII) had mild relapses of gastro-intestinal upset similar to that experienced at first. During these relapses and since clinical recovery (a period of 3 months), his stools have continued to show almost pure cultures of Salmonella oranienburg. Cultures of bile obtained by transduodenal biliary drainage have been positive for this same organism. His cholecystogram has been negative. This case may be classified as a gall bladder or hepatic duct carrier. Another patient, a nurse, ran a similar course, with positive stool cultures throughout June and until 22 July, since which they have been repeatedly negative. She may be considered as a temporary intestinal carrier. In neither case did sulfaguanidine or sulfadiazine in full doses have any noticeable effect.



Case No. III.—13 May in P.M. abdomen felt full and tender. Had several loose stools. During next several days felt tired and achy. Diarrhea came and went. At times felt feverish, temperature not recorded. 18 May in P.M. felt very chilly, followed by feverishness and malaise. Admitted 19 May 1830, 5 days after onset. P.E. negative except borborygmus. WBC 7700, polys. 64, lym. 36. Smear for malaria negative. Stool culture negative for Salmonella 21 May. Blood culture also negative 24 May. Agglutination positive 1-2560, 24 May. It seems probable that first peak of temperature, or toxic stage, occurred prior to admission.

Source of Infection

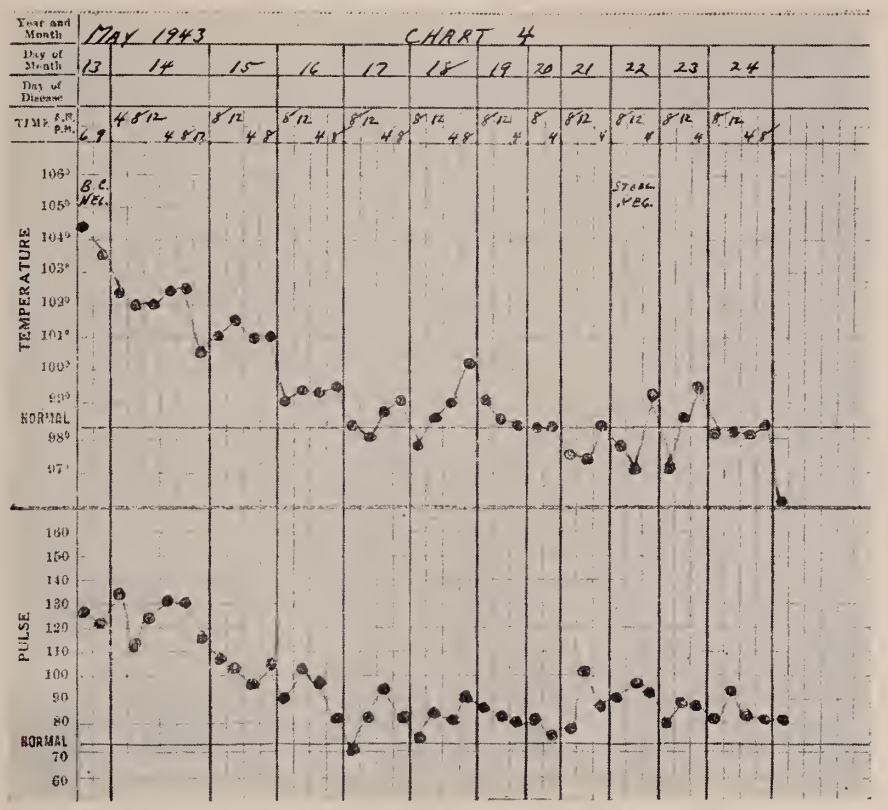
The acute affection of so large a number of the same organization, with a picture predominantly that of gastro-intestinal infection, naturally led to the investigation of the food and water supply as the possible source of this infection. Of the total personnel messing here at the time, only officers, nurses, and three enlisted men were sick. Since the water supply was everywhere the same, it appeared that this could be eliminated, and our attention was turned to the officers' mess. This mess is operated separately from those of the detachment and the patients. By personal interview it was found that, with few exceptions, all ate breakfast and lunch in this mess on 12 May, 1943, the day before the clinical outbreak; on the other hand, seventy-four (74) did not eat supper here on the night of 12 May. Of this number only one was similarly affected to a mild degree some four days later. Of

ninety-eight (98) who ate this supper, forty-two (42) were sick. Also, the three sick enlisted men had returned late from an assignment elsewhere and had been fed from the officers' mess on night of 12 May.

Further investigation of this meal was carried out by L. T. Stoneburner, Captain, M. C. It consisted of chili, string beans, pickles, peanut butter, cocoa, bread, and rice pudding. The chili, string beans, and cocoa were freshly prepared and served hot. The peanut butter and pickles had been freshly opened. The bread had just been sliced. The rice pudding had been made up in bulk the night before, i.e., night of 11 May, 1943, about 11:30 P. M. and set aside in four large pans, in which it sat for the following seventeen (17) hours without refrigeration, not then available. The other messes were served from three of these pans, whereas all officers, nurses, dietitians, physical therapy aides, Red Cross workers, and the three sick enlisted men were served from the fourth pan.

The 101 persons who ate this meal were questioned personally as to what foods they ate and the following data accumulated: 45 per cent of those eating bread (100) were sick; 48 per cent of those eating peanut butter (93) were affected; 45 per cent of those drinking cocoa (99) were ill; 50 per cent of those eating pickle (95) were sick; 54 per cent of those eating string beans (84) were affected; 55 per cent of those taking chili (82) became ill; and 57 per cent of those eating rise pudding (79) were sick. Of twenty-one (21) who ate no rice pudding, none was sick. Furthermore, among those affected none failed to eat rice pudding, whereas at least one or more did not eat one, or more, of the other items.

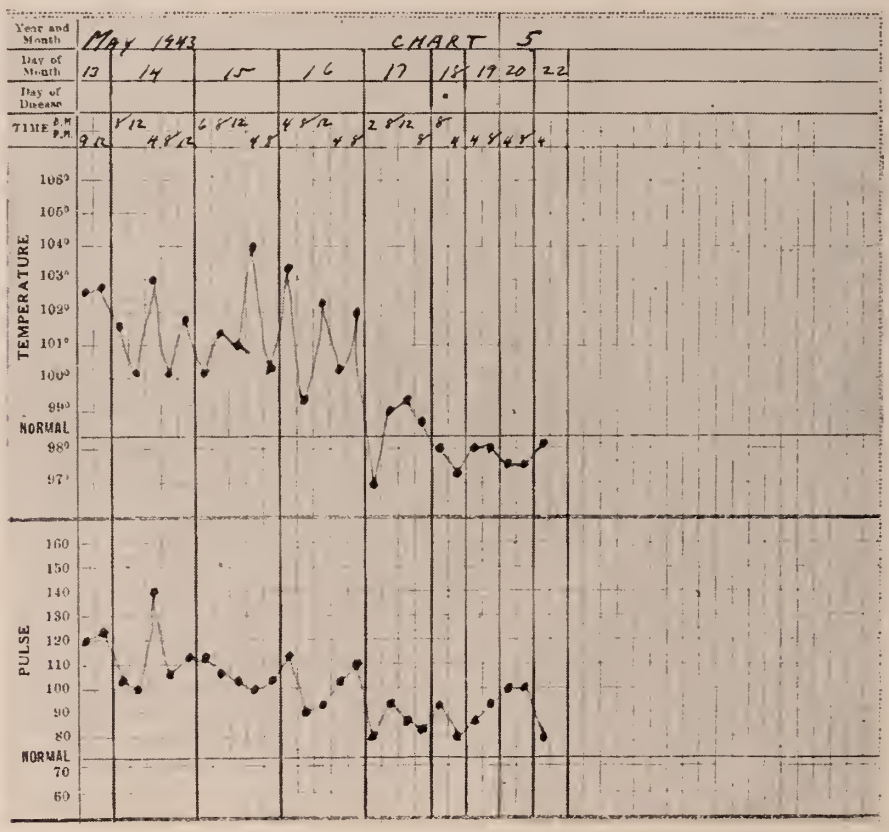
As is usual in such circumstances, none of the



Case No. IV.—13 May in A.M. had vague abdominal discomfort. Bowels moved normally. During next several hours became very chilly and had severe headache and backache. No other gastro-intestinal, respiratory or genito-urinary symptoms. Admitted at 1700. P.E. Temperature 104, no other findings. WBC 21,900, polys. 88, lym. 12. X-ray of chest showed questionable increased density at 7th rib level on right. Sputum obtained with difficulty, negative for pneumococci. With suspicion of early lobar pneumonia sulfadiazine was given in usual doses. In next 2 days developed marked nausea, vomiting and diarrhea. Stool negative for Salmonella, 22 May. On 10 June, 28 days after onset, agglutination positive 1-1280. Note confusion with pulmonary infection.

suspected food was available for study.

It seems reasonable to conclude that the rice pudding was contaminated and served as the source of the infection. How it became contaminated is not hard to guess when one realizes the habits of the Arabs, employed at that time in considerable numbers in the hospital building program, plus the presence of large numbers of ordinary flies. Not a day passed but it was necessary to remove several piles of human feces from various relatively secluded points about the grounds. Many of these were found in a small grove of bushes some fifty yards from the officers' mess hall which was screened throughout but had only one screen door, rather than a double entry, so that ingress of some flies was unavoidable.



Case No. V.—13 May awoke about 0230 feeling hot and aching all over. About 0400 had hard shaking chill lasting 5 minutes. Throughout day felt feverish and weak, had 3 or 4 loose stools, nose felt stuffy and discharged slightly. Admitted 2300. P.E. negative, WBC 5300, polys. 71, lym. 29. Urine twice negative. During next few days had moderate diarrhea, was very toxic, drowsy and sick looking. Stool negative 22 May. Exact diagnosis in this case not made. Time of onset plus general course makes it probable patient had same infection as others. Note classical typhoid appearance.

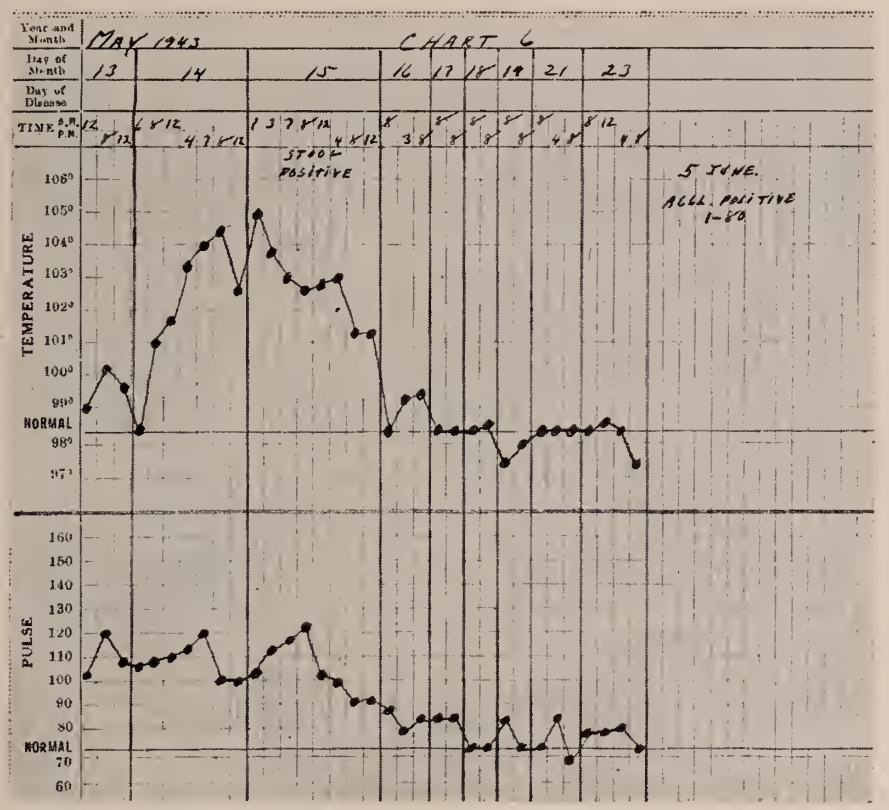
Bacteriological and Serological Studies

Routine stool cultures were run on 16 patients during their period of hospitalization, and in 12 cases a Salmonella-like organism was found. Isolation of the organism was effected on S. S. agar plates. All strains of this organism were lactose, sucrose, and indol negative, and did not liquefy gelatin. The organism was motile, and fermented mannite, maltose, xylose, dulcitol, sorbitol, rhamnose, arabinose, and dextrose with the formation of acid and gas. H_2S was produced on Kleigler's iron agar and an alkaline slant was formed on Simmon's citrate agar. Acid was produced on sodium tartrate agar (DIFCO).

This organism was agglutinated to partial titer by S. hirschfeldii diagnostic antiserum, but the

serum from the convalescent patients did not agglutinate S. hirschfeldii except in a few instances in very low titer. This indicated the organism was antigenically related to S. hirschfeldii but not identical with it. A culture of the organism was sent to the Army Medical Center, Washington, and was identified as Salmonella oranienburg. ("O" factors —VI, VII. . . ., "H" factors—mt . . .).

cases. For control purposes, serum was also collected from six persons who had no history of diarrhea and had not eaten the suspected foods. These sera were obtained between two and three weeks after the onset of the epidemic, and agglutination tests were run against suspensions of typhoid "H", typhoid "O", S. paratyphi, S. schottmulleri, S. hirschfeldii, and S. oranienburg. Serum dilutions



Case No. VI.—13 May awoke with vague cramping pain around umbilicus which seemed to settle in RLQ. Vomited breakfast, bowels moved normally. Normal menstrual period occurred 2 weeks before. Admitted 1230. P.E. Temperature 99. There was tenderness and rebound tenderness in RLQ. WBC 10,400, polys. 84, lym. 16, urine normal. A diagnosis of acute appendicitis was made and operation performed. Ruptured bleeding right ovarian follicle found and repaired. Appendectomy. Next day patient had nausea, vomiting and profuse watery diarrhea. Condition considered serious. Peritonitis feared. 15 May stool positive for Salmonella, general condition improved. Recovery uneventful. On 5 June, 22 days after onset, agglutination positive 1-80. Note Salmonella infection coincident with ruptured ovarian follicle and operation, creating alarming clinical condition.

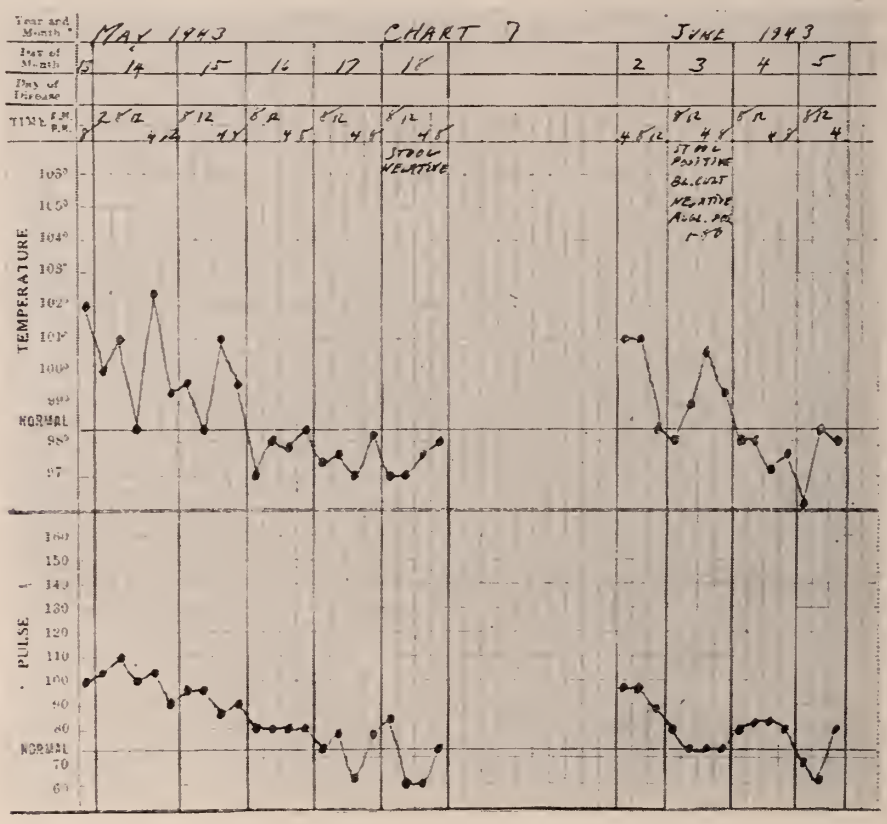
Blood cultures were taken on six patients and S. oranienburg was isolated in two instances. One of the cases with a positive blood culture had negative stool cultures.

As soon as it was realized that we were dealing with a Salmonella epidemic, serum was collected from all of the severe cases and many of the mild

ran from 1-40 to 1-5120. To a certain degree, the relatively high agglutination titres against typhoid H, S. paratyphi, S. schottmulleri may well have been due to fact that all members received stimulating dose of U. S. Army typhoid vaccine 3 weeks before outbreak of epidemic. (Chart VIII.) A total of 22 cases had positive laboratory evidence of infection

with S. oranienburg. In only one instance were agglutination tests repeated on a patient (Case No. VII). This patient showed a generalized increase in agglutination titer within the group with a marked increase in titer for S. oranienburg. The heavy routine work performed by the laboratory under field conditions made it impractical to repeat the agglutination tests on all patients.

Subsequent stool cultures made on all personnel who gave a history of illness at the time of the epidemic were negative except in two instances. One case ran positive stool cultures for nine weeks, and one case developed into a chronic bile carrier with positive bile cultures and persistently positive stool cultures.



Case No. VII.—13 May toward noon began to have severe frontal headache and had several loose watery stools. In P.M. had several shaking chills followed by feverishness. Headache and diarrhea continued. At times had involuntary stools. By nightfall headache almost unbearable despite numerous doses of aspirin and codeine. Became drowsy—admitted 1930. P.E. appeared toxic and semi-stuporous, spleen readily palpable, smooth, hard, and non-tender; questionably palpable liver. WBC 17650, polys. 87, lym. 13, urine normal. Meningitis, encephalitis and typhoid fever considered in diagnosis. Spinal puncture contemplated but omitted. Great improvement in next few days. Stool negative 18 May. Returned to duty 19 May but during next 2 weeks continued to feel weak and badly. 1 & 2 June felt feverish and exhausted. Readmitted 2 June 1550—T. 101, spleen as before. Thought to be slightly jaundiced. Icteric index 15. Blood culture negative 3 June. Same date agglutination positive 1-80. Stool positive for Salmonella oranienburg and has continued so on many occasions although patient clinically well since 5 June, a period of 2 months. Agglutination titre had risen to 1-1280, 24 June. Urine thrice negative for Salmonella. Bile culture positive 22 June. Cholecystogram normal 10 July. Note "typhoid" nature of onset and development of gall-bladder or hepatic duct type of carrier state. The question of cholecystectomy was considered.

SUMMARY AND CONCLUSION

An epidemic of gastro-enteritis caused by S. oranienburg has been reported. Forty-five (45) persons were affected to some degree. Apparently contaminated rice pudding was the source of the infection. One patient developed into a gall-bladder or hepatic type of carrier, and another was a temporary intestinal type carrier.

A MINOR EPIDEMIC OF SALMONELLA INFECTION
CHART NO. VIII
BACTERIOLOGICAL AND SEROLOGICAL STUDIES

AGGLUTINATION TITER (COMPLETE AGGLUTINATION)										CLIN.
TY-H	TY-O	PARATYPHI	SCHOTT	HIRSCH	O'ANIEN	SEVERITY	BL. CULTURE	STOOL CULT.	BILE CULT.	CHARTS
1-320	0	1-320	1-160	0	1-320	severe	Neg.	Pos.		
1-160	0	1-640	1-160	0	1-2560	severe	Neg.	Neg.		III
1-320	0	1-80	1-80	0	1-1280	severe	Pos.	Neg.		I
1-160	0	1-160	1-80	0	1-1280	severe		Pos.		
1-80	0	1-80	1-40	0	1-1280	severe	Pos.	Pos.		II
1-320	1-40	1-640	1-320	0	1-160	mod. sev.		Pos.		
1-160	0	1-80	1-80	0	1-80	mild		Pos.		VI
1-40	0	1-320	1-40	0	1-80	mild				
1-160	0	1-320	1-320	0	1-80	severe	Neg.	Pos.	Pos.	VII
1-640	0	1-320	1-640	0	1-1280					VII
1-320	0	1-160	1-160	0	1-80	mild		Pos.		
1-160	0	1-320	1-160	0	1-80	mild		Pos.		
1-80	0	1-160	1-160	0	1-40	mild		Pos.		
1-320	0	1-320	Unsat.	0	1-80	mild				
1-160	0	1-40	1-80	0	0	very mild				
1-640	1-40	1-640	1-160	0	1-80	moderate		Pos.		
1-1280	0	1-320	1-160	0	0	mild				
1-640	1-40	1-320	1-320	1-40	1-40	moderate				
1-320	0	1-640	1-640	0	0	very mild				
1-160	0	1-320	Unsat.	0	1-40	mild				
1-160	0	1-160	1-160	0	0	very mild				
1-640	1-40	1-80	1-640	1-80	1-160	mild		Pos.		
1-1280	0	1-320	1-1280	1-80	1-80	mild				
					1-40	mild				
1-1280	0	1-320	1-320	1-40	1-1280	severe	Neg.	Neg.		IV
1-160	0	1-160	1-160	1-40	1-160	mild				
1-320	0	1-80	1-40	0	1-640	moderate		Pos.	Neg.	
						moderate		Neg.		
						mild		Neg.		
1-640	0	1-320	1-640	0	0	control				
1-320	0	1-40	1-160	0	0	control				
1-160	1-40	1-160	1-320	0	0	control				
1-80	1-40	1-160	1-160	0	0	control				
1-320	0	1-160	1-80	0	0	control				
1-640	1-40	1-640	1-320	0	0	control				

Serum dilutions from 1-40 to 5120 Nelson-Snider

Soda for Wood Alcohol Poisoning.

Four Navy doctors, who made a study of methyl (wood) alcohol poisoning, believe the essential principle of treatment is the correction of acidosis with an alkali, such as soda.

The doctors, who reported this study in the January 12 issue of *The Journal of the American Medical Association,* are: Commander W. B. Chew, Commander E. H. Berger, Captain O. A. Brines, and Captain M. J. Capron, of the United States Naval Reserve.

Of 31 military personnel patients suffering from wood alcohol poisoning and under the care of these doctors, five died within three hours after admission to the hospital. The rest recovered and were returned to duty. The authors felt that their success was due to the prompt elimination of acidosis, sometimes called acid intoxication.

Methyl alcohol poisoning usually results in blindness or death. The poison seems to have a selective effect on the optic nerve and retina of the eyes. The symptoms are usually delayed for nine to 36 hours, during which time an individual may continue to carry on. Suddenly weakness, headache, nausea, vomiting and collapse occur. If death does not come first, then the coma may last for several days before improvement occurs. Permanent blindness is then a frequent result.

THE EARLY CLINICAL RECOGNITION OF CORONARY ARTERY DISEASE—WITH TEN CASE REPORTS

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Baltimore, Maryland.

That the correct diagnosis of coronary artery disease is not always an easy one has been impressed upon me by my experiences of the last few years in examining and treating men of military age in Army hospitals. While seeking so-called typical clinical patterns, I have become increasingly aware of the frequency with which coronary artery disease may present itself in less common guises. Perhaps the fact that soldiers present themselves for treatment when symptoms are minimal contributes to the diagnostic problem, as modern ideas of cardiac disease are based upon civilian observations, and in civilian life most patients do not consult their physicians so promptly or so early in the course of their disease.

In the military service, where medical care is promptly available, and laboratory facilities and hospitalization easily secured, one should be able to observe coronary artery disease in its earlier stages. This paper is based upon observation of cardiac patients in Army hospitals during the past few years. During that time I have had under observation with coronary disease 8 men under 35 years of age, of whom 2 were 26, with no early fatalities among them. This report represents an attempt to crystallize this military medical experience. While the observations may not be new to experienced clinicians, only by continued emphasis upon these problems will further progress be made.

Not so many years ago, however, the subject of coronary artery disease was associated with thoughts of older patients, severe pain, obvious electrocardiographic changes, and sudden death, for then coronary artery disease was too commonly recognized only when obviously severe and perhaps fatal. Early in 1944 workers at the Army Medical Museum reported[1] autopsy findings of 80 of 100 cases of fatal coronary arteriosclerosis in young soldiers between 20 and 36 years of age. The report states that only one-third had prodromal symptoms suggestive of heart disease. Of this latter group, none displayed any evidence of coronary disease on careful study, and only one had been diagnosed and treated before the final fatal episode.

This report brings up several interesting points: First, coronary artery disease is a disease affecting the younger age groups as well as the older. Secondly, the underlying process is the same in the young as in the old—arteriosclerosis. Third, there is still much to be done in the early recognition of these cases. Fourth, and finally, if so many fatal cases were found in young persons, how many more must exist in all age groups that go unrecognized clinically?

Before proceeding further it would be well to define our terms. By coronary artery insufficiency is meant the condition when the coronary arteries do not fulfill their normal function of carrying an adequate blood supply to the heart muscles; that is, when the coronary flow is inadequate or insufficient. This may be caused by increased need on the part of the heart muscle, or by decreased supply via the coronary arteries, or both. We are concerned here with the latter—inadequate supply via the coronary vessels.

Myocardial infarction is a result of coronary insufficiency. At autopsy one may find coronary artery disease without infarction, infarction without complete coronary occlusion, and pathologically demonstrable coronary disease without history of a corresponding clinical picture. Similarly, autopsy of some patients with clinical symptoms of coronary insufficiency may disclose no myocardial infarction. In acute coronary insufficiency patients may succumb suddenly because of a fatal arrhythmia, such as ventricular fibrillation, before gross infarction has developed.

The extent of the myocardial damage is dependent upon the degree and the duration of the coronary insufficiency, as shown by the studies of Blumgart and co-workers.[2] Sudden narrowing of the coronary vessels of experimental animals to less than 15 per cent of the original cross section resulted in sudden death. With gradual narrowing,

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Presented (by invitation) before the Medical Association of the Valley of Virginia, 27 September, 1945, at Staunton, Virginia.

however, the survival time was longer, and autopsy study disclosed a rich anastomotic circulation. The collateral circulation was shown to be functionally significant, for then the animals survived sudden complete occlusion of the previously narrowed artery.

Coronary insufficiency may be encountered in shock, at times resulting in actual myocardial infarction, as a result of drop in blood pressure, and inadequate coronary blood flow. A case in point (*Case 1*) is that of a 19 year old white soldier, who suffered from shock and anemia postoperatively. He had marked tachycardia and shortness of breath, and was placed in an oxygen tent. Electrocardiographic studies showed changes indicating anterior coronary insufficiency. The electrocardiogram showed improvement as the patient's clinical condition improved.

The most common cause of coronary insufficiency, however, is arteriosclerosis of the coronary artery, to which the major part of this discussion will be limited. If the arteriosclerosis is gradual and progressive, anastomoses may form, and the patient may never have a gross acute myocardial infarction. If coronary occlusion occurs in an older patient, one might expect the immediate prognosis to be better than in a younger patient because of the presence of such anastomoses, and the ultimate prognosis to be worse in an older patient because of the greater degree of diffuse coronary arterial disease present, for in a younger patient the sclerotic changes may be more localized.[3] This is not substantiated by the studies of Rosenbaum and Levine,[4,5] who conclude that the immediate mortality increases with advancing years, and that their younger patients had a distinctly longer survival period than the older ones. Infarction of the myocardium may occur when a thrombus suddenly occludes a narrowed vessel—perhaps because of subendothelial hemorrhage at the site of an arteriosclerotic placque—or when the increased oxygen demands of the myocardium are not met because the coronary arteries, though patent, are narrowed and insufficient.

Coronary insufficiency may be temporary. When increased activity requires more oxygen for the myocardium, and the coronary arteries are insufficient to supply this need, the reflexes involved may cause anginal symptoms. "In this syndrome the major symptom is chest pain, which is precipitated usually by effort, but sometimes by excitement, a heavy meal or exposure to cold. Pain is usually substernal or just to the left of the sternum. Occasionally the pain is epigastric and at rare instances it may be localized in the neck or left arm or shoulder. There is a tendency for the pain to radiate, most frequently to the left shoulder and arm and occasionally to the fingers. Less frequently it may radiate to the neck, jaw and teeth, to back, upper abdomen, or to the right shoulder and arm. At times the pain will start at one of these points before focusing on the anterior surface of the chest. . . . The precipitating cause is commonly physical exertion, rest usually causes the pain to subside. The length of the attack, therefore, is relatively short."[6] Anginal pains are frequently relieved by vasodilators, such as nitroglycerine and amyl nitrite.

The following cases serve to illustrate the points mentioned and to call attention to several other pertinent factors in this condition:

Case 2.—A 45 year old white male officer experienced an aching discomfort after effort. This discomfort would begin on either side of the neck and radiate along the outer side of each mandible to the chin. It was of moderate severity, occurred only after exercise, and was immediately relieved by nitroglycerine. This patient's electrocardiogram was normal at rest, but after exercise showed changes indicative of coronary insufficiency.

Case 3.—This 50 year old white male officer had typical anginal symptoms for several weeks, after which he suddenly had an acute, severe, typical episode of myocardial infarction. Electrocardiogram at rest was normal, but after exercise showed changes indicative of coronary insufficiency.

Case 4.—In May, 1944, a 34 year old colored male soldier began to experience shortness of breath, sweating and tightness at the base of the neck on running a distance of 100 yards or more. These symptoms continued unchanged in degree until 4 July 1945, when the patient had a severe attack of crushing precordial pain at rest, lasting for several hours. He was hospitalized and found to have myocardial infarction, with characteristic electrocardiographic changes indicating anterior coronary occlusion.

Case 5.—A 38 year old white male officer began to experience angina on exertion in August, 1944. His symptoms were relieved immediately by rest. In April, 1945, after exertion he experienced precordial pain, subsiding spontaneously after one-half hour. He was hospitalized, where electrocardio-

graphic findings were those of acute anterior coronary occlusion.

The cases noted above indicate that angina need not always present a typical picture. Pain about the jaw and neck is unusual as the primary and only site of anginal discomfort, while it is not so uncommon as a secondary site.[7] The sudden onset of angina pectoris in a patient previously well, or a sudden increase in the frequency and ease of precipitation of anginal symptoms in a patient with known angina pectoris should suggest recent impairment of the coronary circulation in the first instance, or recent spread of the coronary process in the second instance. This is borne out by the studies of Blumgart, Schlesinger and Davis.[8]

We have observed several patients who experienced no discomfort before meals, but who state that on walking back from mess they have noted substernal discomfort. Other patients note that their anginal symptoms are precipitated by much less effort after eating than before eating. This clinical picture is explained by the fact that distention of the stomach causes reflex vasoconstriction of the coronary arteries, resulting in a measurable decrease of coronary blood flow in experimental animals. Exercise tolerance is decreased after meals in these patients. Distention of a hollow viscus, such as the gall-bladder, also may cause reflex vasoconstriction and decrease in coronary blood flow. This may explain why certain patients with cholecystitis and angina pectoris experience improvement in the anginal symptoms after cholecystectomy. Exposure to cold has a similar effect, and some patients may experience anginal symptoms more easily when walking in the cold or against a cool wind.[9]

An interesting case (*Case 6*) is that of a 53 year old white male, a diabetic. In December, 1943, he experienced sudden precordial discomfort, a sensation of tightness, while walking. An electrocardiogram was taken within 20 minutes of the onset of this discomfort, and disclosed auricular fibrillation. This arrhythmia subsided spontaneously after it had lasted for 30 minutes. The patient was hospitalized for 2 days for observation and then resumed his duties. He then began to experience shortness of breath while climbing uphill, associated with a sensation of tightness substernally. In February, 1945, he had a second episode of paroxysmal auricular fibrillation, lasting for about one-half hour. During July and August, 1945, he had frequent episodes of paroxysmal auricular fibrillation. Since then his anginal symptoms are more severe, and are more easily precipitated.

This case serves to emphasize the fact that the sudden onset of an arrhythmia in a patient previously well should be regarded with suspicion and evidence of coronary disease sought for.

Coronary insufficiency may be sudden, severe and alarming, as in coronary thrombosis and acute myocardial infarction. Typically, the patient may experience "severe, substernal, precordial or epigastric pain, sudden in onset, of prolonged duration, occurring either at rest or with exercise or with exertion. Administration of nitrites does not afford relief. . . . Fall in blood pressure. . . . Faint heart sounds. . . . Fever appearing 8 to 24 hours after onset and rarely high. Leucocytosis with increase in polymorphonuclears may be present within the first 6 or 8 hours. Acceleration of the erythrocyte sedimentation rate is found after the third day. Pericardial friction rub."[10]

However, there are many instances when the clinical picure is not so typical. We have observed a number of exceptions, of which the following cases are illustrative:

Case 7.—A 26 year old white male soldier experienced pain localized about the apex of the heart, over an area covered by a 50-cent piece. This pain was severe, aching, and subsided spontaneously after 2 hours. During the next week the soldier had vague discomfort about the apical region precipitated by exertion; but he continued with his military activity. On the seventh day, after sudden gaseous eructation, he experienced severe pain of the type noted earlier, lasting for one hour, then subsiding spontaneously. He was hospitalized on the following day, and the electrocardiogram revealed changes indicative of anterior coronary occlusion.

Case 8.—A 36 year old white male soldier experienced vague aching discomfort, "like rheumatism", about the left elbow region for a period of 2 days. On the third day he had severe precordial pain, and presented a typical clinical picture of coronary occlusion. Electrocardiographic study revealed changes of acute anterior coronary occlusion.

Case 9.—A 35 year old physician was awakened at 6 A. M. by moderate, aching, substernal discomfort. This discomfort subsided spontaneously after one-half hour and the patient again fell asleep.

Physical examination the next day revealed no abnormalities. An electrocardiogram was normal. The physician refused bed rest for further observation. During the next two weeks he experienced slight dyspnoea upon walking up hills or climbing steps, and attributed this to loss of sleep due to overwork. An electrocardiogram taken 2 weeks after the initial episode revealed changes indicative of anterior coronary occlusion. He was put to rest and during the next few weeks his electrocardiogram showed typical serial changes.

Case 10.—A 46 year old physician experienced vague burning discomfort, localized at the apex of the heart. This lasted for 2 hours, and was relieved by 1/64th grain dilaudid. The patient slept well. The next morning while walking up an incline, he experienced minimal shortness of breath, and slight discomfort at the apex of the heart. An electrocardiogram was within normal limits. The patient was hospitalized for observation. Further studies revealed no leukocytosis, fever, or elevation of sedimentation rate. However, during the next few weeks the patient's electrocardiogram gradually became abnormal, with lowering and then inversion of the T waves in Leads I and IV. By the end of the seventh week the record was again normal.

These clinical illustrations serve to emphasize that the pain in prolonged coronary insufficiency is not always typical in character or in duration. At times the sudden onset of cardiac failure may be the first sign of coronary occlusion. These cases emphasize the importance of careful study and observation of all patients suspected of coronary artery disease. The electrocardiographic changes may not appear until some time has elapsed. A changing electrocardiographic pattern is important, even if single electrocardiograms are not grossly abnormal. Further, while electrocardiographic changes commonly are found early, they may on occasion not appear until later.

While in many cases patients with symptoms similar to those in the cases described above will be found upon careful study not to have cardiac disease, one should be alert to the fact that coronary artery disease may present itself in atypical fashion. One should, therefore, maintain a high index of suspicion in dealing with patients whose symptoms are suggestive but not typical of coronary disease. A good adage is to treat a patient with a sufficiently suggestive clinical picture as though he had coronary disease until proven otherwise. Only in this way will more patients be treated for coronary artery disease early in their clinical course, rather than later when the clinical picture is more obvious.

As for the electrocardiogram, while it is a useful laboratory procedure, its importance should not be over-emphasized. When the clinical picture is obvious, the electrocardiogram is confirmatory, and aids in following the evolution of the process. When the clinical picture is suggestive, the electrocardiogram may furnish corroborative evidence, but when negative initially does not disprove the diagnosis. Serial electrocardiograms are more important than an isolated record. Electrocardiographic changes may be delayed in their appearance. Finally, as Levine so aptly remarked: "As a general axiom, the more thoroughly one understands electrocardiography, the less one needs it."[11]

SUMMARY AND CONCLUSIONS

Observation of cardiac patients of military age justifies emphasis upon the fact that coronary artery disease may manifest itself as an atypical clinical picture. Ten illustrative cases are here described. Not only may the pain be mild in character, unusual in location and brief in duration, but pain may be absent altogether, and the sudden onset of cardiac arrhythmia or of cardiac insufficiency may herald a coronary accident.

Since electrocardiographic changes may be late in appearance, relatively transient, and often minor in single tracings, serial electrocardiographic study is important. In all cases, however, the clinical picture is most important, and one should maintain a high index of suspicion despite an initially normal electrocardiogram. Conversely, when routine electrocardiographic study in an apparently normal young person is suggestive of coronary artery disease, one should inquire into the past history most carefully before concluding that the "range of normal electrocardiographic findings" should be widened.

Finally, one has reason to expect that further studies upon younger persons, with wider use of electrocardiography, will disclose coronary artery disease to be more frequent, and the ultimate prognosis better than is now indicated by observations upon older age groups.

BIBLIOGRAPHY

1. French, A. J., and Dock, Wm.: Fatal Coronary Arteriosclerosis in Young Soldiers. *J.A.M.A.* **124**: 1233, 1944.
2. Blumgart, H. L., Hoff, H., Lansdowne, M., and Schlesinger, M. J.: Experimental Studies on the Effect of Temporary Occlusion of Coronary Arteries. Tr. A. Am. Physicians **42**:210, 1937.
3. Bramwell, C., and King, J. T.: The Principles and Practice of Cardiology. Oxford Univ. Press, London, 1942, p. 408.
4. Rosenbaum, F. F., and Levine, S. A.: Prognostic Value of Various Clinical and Electrocardiographic Features of Acute Myocardial Infarction—I. Immediate Prognosis. *Arch. Int. Med.* **68**:913, 1941.
5. Levine, S. A., and Rosenbaum, F. F.: Prognostic Value of Various Clinical and Electrocardiographic Features of Acute Myocardial Infarction—II. Ultimate Prognosis. *Arch. Int. Med.* **68**:1215, 1941.
6. Criteria Committee of the N. Y. Heart Association: Nomenclature and Criteria for Diagnosis of Diseases of the Heart. N. Y. Heart Association, N. Y., 1940, p. 68.
7. Harrison, T. R.: Clinical Aspects of Pain in the Chest —I. Angina Pectoris. *Am. J. Med. Sc.* **207**:561, 1944.
8. Blumgart, H. L., Schlesinger, M. J., and Davis, D.: Studies on the Relation of the Clinical Manifestations of Angina Pectoris, Coronary Thrombosis, and Myocardial Infarction to the Pathologic Findings. *Am. Heart J.* **19**:1, 1940.
9. Freedberg, A. S., Spiegl, E. D., and Riseman, J. E. F.: Effect of External Heat and Cold in Patients with Angina Pectoris: Evidence for the Existence of a Reflex Factor. *Am. Heart J.* **27**:611, 1944.
10. Criteria Committee of the N. Y. Heart Assn.: Nomenclature and Criteria for Diagnosis of Diseases of the Heart. N. Y. Heart Assn., N. Y., 1940, p. 38.
11. Levine, S. A.: Auscultation of the Heart. *N. Eng. J. Med.* **225**:526, 1941.

Develop Sunburn Salve.

A petrolatum compound, developed as a result of wartime research, has been found to give excellent protection to the skin against long exposures to the sun. According to an article in the January 5 issue of *The Journal of the American Medical Association,* the sunburn ointment is not irritating to the skin nor will it come off easily in water.

The experiments were made under the direction of Matthew Luckiesh, D.Sc., of the Lighting Research Laboratory, General Electric Company, Nela Park, Cleveland. He was assisted by A. H. Taylor, and two physicians, H. N. Cole, and Torald Sollmann, from the Department of Dermatology and Syphilology and the Department of Pharmacology and Experimental Therapeutics of Western Reserve Medical School.

The authors said that dark red veterinary petrolatum was the safest, most practicable, most cohesive and nontoxic agent found in their search for a protective skin coating for the prevention of sunburn.

The research was undertaken in behalf of the Army Air Forces, which needed a protective cream or ointment for fliers forced down in the Pacific area. The product had to withstand heat and cold, be free from rancidity, lend itself to simple packing, be nontoxic and not wash off. These requirements made it possible to place the ointment on life rafts or military aircraft.

In explaining their method of testing, the authors wrote: "The (ultraviolet light) exposure of 10 seconds on the subject, without any protection, produced a moderately strong erythema (sunburn), while a 20 minute exposure produced no visible erythema when the same subject had a thin coating of the compound. This exposure was equivalent to 20 hours of the strongest sunlight in Cleveland measured during a four year period. It is quite evident that this petrolatum alone, with nothing added, would give ample protection to the skin. Moreover, the petrolatum rubbed into the skin of one of us several nights in succession gave no evidence of irritation."

Six subjects were used in these experiments with an ultraviolet source intensity equivalent to 60 times the most intense sunlight measured in Cleveland over a period of years. One minute of exposure to this source is comparable to about two hours of average midsummer noon sunlight in Cleveland.

RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE EXTERNAL EYE*

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External diseases of the eye are the red-headed stepchild of the ophthalmologist. This has always been more or less true, but today, due to the burden imposed by war, we find external diseases enjoying even greater neglect than heretofore.

Whenever a red eye is encountered and the external eye is obviously affected, all too often, without further ado, the diagnosis of conjunctivitis is imposed, some salve or drop prescribed, and no effort is expended in running to earth the etiological agent. Since the majority of external diseases are self-limited, this course frequently results in a happy termination; but all too often such is not the case and a lapse into chronicity results. In any event, in this so-called enlightened age we as ophthalmologists should be satisfied only when the true nature of the lesion has been established and scientific therapeusis instituted.

In this paper an effort has been made not to attempt a discussion of the whole field of external diseases but rather in the time allotted to point out some of the recent advances in the diagnosis and treatment of diseases of the external eye.

Diagnosis in most cases of external disease is a relatively simple and easy procedure. Direct smears when Gram stained are usually sufficient for revealing the offending organism but considerable additional information such as the presence of inclusion bodies and the prevailing cytology can be gleaned from a study of epithelial scrapings obtained with the platinum spatula and stained with Giemsa. If tubercle is suspected, the acid fast stain is of value while Victoria blue stains virus elementary bodies beautifully. Examination by dark field is of value in diagnosing primary luetic lesions as well as Vincent's. In some instances, particularly where there is granulation tissue or a new growth, biopsy must be resorted to.

Cultures are important in practically every case of external disease. Usually the rabbit blood agar plate will suffice but, if further information is desired, as in determining staphylococcic pathogenicity, the phenol red mannitol agar plate should be employed and the results confirmed by the coagulase test. Where anaerobes are to be cultured chopped meat medium is preferable and for growing diphtheria and the diplobacillus Loeffler's remains the best culture medium. If the diagnosis still hangs in doubt and further studies are needed animal inoculation should be tried. This can be carried out in several ways. Intraperitoneal injection or injection into the groin of a guinea pig or into the anterior chamber of a rabbit is of value in establishing the diagnosis of tuberculosis, while the herpes and vaccinia virus can be identified by scarifying the cornea of a rabbit and observing the resulting keratitis or encephalitis. The herpes virus can also be grown on the chick chorioallantoic membrane and is perhaps best isolated in pure culture by intracerebral mouse injection. This method has also been used by Sanders in isolating the virus of epidemic keratoconjunctivitis.

Perhaps the commonest external disease with which we have to deal is a blepharoconjunctivitis caused by the pathogenic staphylococcus. When cultured the organism is usually found to be of the aureus strain and is mannitol and coagulase positive. The organisms are found for the most part lodged in the Meibomian glands and from here they spill over into the conjunctival sac. In order to affect a cure a fairly rigorous regime must be instituted. The lid margins should be touched biweekly with 1 per cent silver nitrate solution and the Meibomian glands massaged often. Five per cent sulfathiazole or, better still, sulfadiazine ointment should then be placed in the conjunctival sac several times a day and each night the cilia roots carefully cleansed with an applicator containing the ointment. In recalcitrant cases, instead of the sulfa ointment, a penicillin ointment (petrolatum base) containing from 500 to 1000 Oxford units per gram of ointment base will be found valuable. A course of staph. toxoid to accompany this local treatment will frequently bring about a cure when other methods have failed. It is thought that in such instances the toxoid acts, not to build up the patient's staph. titre or resistance, but rather to desensitize the patient to the products of the staphylo-

*Read before the Virginia Society of Ophthalmology and Otolaryngology, April 28, 1945.

coccus. In very stubborn cases Thygeson[1] has found the intramuscular administration of penicillin to be superior to the local use, but only in those cases where the strain of staphylococcus is penicillin sensitive. And it must be remembered that a considerable number of these organisms are penicillin fast, and where such is the case other chemotherapy should be resorted to.

Excision of chalazia either through the conjunctiva or skin surface, depending upon which side they present, is still the method of choice in treating these lesions. The marginal variety are particularly prone to recur after excision and in these instances desiccation with the nonopolar diathermy current is very effective. The lesion should be desiccated at weekly intervals and as a rule two or three such treatments suffice.

Diathermy either of the monopolar or bipolar type is also useful in ablating trichiatic cilia. A fine needle is passed alongside the offending cilia with the diathermy current of sufficient strength to make the needle's passage easy and the treated cilia is then lifted out with forceps.

A somewhat rare cause of persistent uniocular conjunctivitis is a molluscum nodule situated at the lid margin. The appearance of the unbilicated papule is characteristic and the diagnosis is clinched by finding the molluscum bodies stained with Victoria blue. Here too the desiccating current is perhaps the simplest and best method of removing the lesion. And once the lesion has been removed, the conjunctivitis rapidly disappears.

Herpes zoster ophthalmicus is a disease always of serious import. This is particularly true where the cornea and uveal tract are involved, since vision may be permanently reduced as a result of corneal scarring. Gundersen[2] has advocated the use of immunotransfusion (400-500 c.c. of convalescent blood) and has shown that many cases can be aborted or their clinical course considerably modified by such a procedure. At the Institute of Ophthalmology of the Presbyterian Hospital we employed immune serum 50 c.c. intravenously every day for four days with equally good results, and where convalescent serum is available this is the method of choice. If no serum is to be had, moccasin venom intracutaneously, beginning with 0.1 c.c. and increasing the dose 0.1 c.c. as tolerated, is valuable. The venom should be given every other day and the dosage increased as rapidly as possible, for sensitivity develops speedily, frequently within ten days.

Epithelioma of the lids are seen rather often. They are best excised with a wide margin of safety. If the defect created is large and involves only the skin of the lower lid and not the full thickness, a skin graft taken from the upper lid should be used to close the wound. If this plan is not followed, on healing a cicatricial ectropion may result from tissue loss. Where the full thickness of the lid is involved excision with a halving procedure should be carried out, or if the lesion is very extensive a new lid must be created from a temporal flap. X-ray or radium can, of course, be used instead of surgical excision, but when these agents are employed the globe must be carefully screened to prevent severe reactions such as the development of radiation cataract or glaucoma.

Acute dacryocystitis is usually seen as an acute exacerbation of a chronic process, the primary type being exceedingly rare. The diagnosis is easily made since the injection, swelling and tenderness over the sac is pathognomonic. In treating the condition, in addition to hot compresses, either sulfadiazine or penicillin should be employed generally with incision and drainage to follow as soon as pointing occurs. And once the acute process has subsided the chronic form of the disease should be eliminated by carrying out a dacryocystorhinostomy. This operation is highly successful and cures should be obtained in at least 90 per cent of the cases.

Concretions, caused by either the leptothrix or streptothrix organisms, are found occasionally blocking the lacrimal canaliculi. In addition to tearing of the affected eye, a severe chronic conjunctivitis results. The diagnosis should be suspected when the offending organism is discovered either by culture or in scrapings, and investigation of the canaliculus will disclose the concretion. Removal may be accomplished in some instances by milking the canaliculus gently with a spatula, but as a rule the punctum and canaliculus must be split in order to bring about delivery. Once the concretion has been removed both the tearing and the conjunctival reaction disappear.

On rare occasions a cilium in the punctum brings the patient to the ophthalmologist with the complaint of a foreign body. The presence of the offending lash sets up a severe irritation of the conjunctiva in the region of the inner canthus. At times the

offending cilia may be well hidden within the punctum and canaliculus, but careful examination with the loupe or corneal microscope will reveal at least a portion extending from the punctum. When this is removed with forceps symptoms immediately disappear.

Metastatic dacryoadenitis according to the literature is a rare entity, but it probably occurs not infrequently and is misdiagnosed as an orbital cellulitis, cause unknown. The condition should be suspected in any case of orbital cellulitis where sinusitis or dacryocystitis can be ruled out. The presence of tenderness and swelling over the gland makes such a diagnosis likely. Final diagnosis must usually await partial subsidence of the inflammation, when the swollen gland can be seen and palpated, after the upper lid has been partially elevated. Dacryoadenitis of such a character responds rapidly to the general administration of either the sulfa drugs or penicillin. The gonococcus, streptococcus and staphylococcus are the commonest causal agents.

The sulfa drugs and more recently penicillin have been a greater boon to ophthalmologists in the treatment of gonorrheal ophthalmia than in the treatment of any other eye condition. Before the advent of these drugs a purulent conjunctivitis caused by the Neisserian organism was a condition to be dreaded, for the outcome even with good attention all too often resulted in the loss of a globe or at best considerable visual impairment. The picture has now changed radically and the treatment of this condition is both simple and efficacious, cure being affected rapidly and with a minimum of nursing care.

In most cases a diagnosis of Neisserian purulent conjunctivitis can be made from the clinical appearance of the affected eye. Gonorrheal ophthalmia as a rule begins on or before the fifth day. Edema is marked and involves both upper and lower lids equally. Chemosis involves both bulbar and palpebral conjunctiva and there is a profuse dirty discharge of somewhat greenish-yellow hue. Dirty pseudomembranes are not uncommon. Smears reveal the presence of Gram negative intracellular diplococci and cultures made on chocolate agar plates and incubated under 10 per cent CO_2 tension reveal the characteristic clear or slightly opaque colonies of Neisseria gonorrhea after two or three days. Disappearance of the causal organism and clinical cure takes place rapidly when either the sulfa drugs or penicillin are employed, the best method of administering the drugs being to use them generally as well as locally in the form of an ointment.

Inclusion blenorrhea should be readily differentiated from gonorrheal ophthalmia from the clinical aspect alone. This disease which is responsible for about 10 per cent of the cases of ophthalmia neonatorum (Allen[3]) begins after the fifth day (between five and fifteen days) and is characterized by chemosis and infiltration of the conjunctiva, particularly of the lower lid and fornix, the upper lid showing but slight reaction. Discharge is not as profuse as that in gonorrheal ophthalmia and is of a yellowish hue and considerably less viscid. If pseudomembranes occur they are of whitish color, differing markedly from the dirty pseudomembrane of gonorrheal ophthalmia. Scrapings from the conjunctiva of the lower lid stained with Giemsa reveal initial bodies, elementary bodies or mixed inclusion bodies in the cytoplasm of the epithelial cells. If untreated, the condition runs a course of from two months to one year. If promptly and adequately treated with sulfathiazole ointment locally, the inclusion bodies disappear after three days and the clinical course of the disease is shortened to a matter of a few weeks. The clinical appearance and course of the disease is the same in the adult suffering with swimming pool conjunctivitis and the same virus is responsible for both conditions.

In September of 1941 epidemic keratoconjunctivitis appeared in the shipyards of California and from here spread rapidly eastward so that cases were soon appearing throughout the country, particularly in large industrial areas. The disease is characterized by an early glassy edema of the caruncle, semilunar fold and lower bulbar conjunctiva and fornix. After twenty-four hours edema of the lids appears with marked swelling and injection of the conjunctiva. Discharge is scant and composed mostly of mononuclear cells. Involvement of the regional lymphatics then follows, the preauricular gland being particularly affected. In about half of the cases follicles develop and pseudomembranes are not uncommon. Keratitis begins usually on about the fifth day and is characterized by macular infiltrates formed by the coalescense of numerous small dot-like opacities. The infiltrates appear to be in

the deep epithelium or superficial stroma and but rarely stain. The conjunctivitis usually disappears after about two weeks and the infiltrates after from three to four months. In this disease sulfa drugs and penicillin are without value but immune plasma in 50 c.c. doses intravenously will bring about rapid subsidence of the disease or greatly modify its severity. The causal agent is a virus isolated by Sanders.[4]

Vernal catarrh continues to be one of our most baffling problems. From practically every standpoint its etiology appears to be on an allergic basis and yet specific sensitivities can rarely be proved. Thygeson has seen one case where a sensitivity to feathers was present and removal of this allergen resulted in cure. The palpebral type of the disease is characterized by the pale pink giant papillae located on the tarsal surface of the upper lid and the limbal variety by the appearance of small elevations around the limbus resembling grains of tapioca and not infrequently containing pathognomonic "Trantas spots". Itching is pronounced and conjunctival scrapings contain large numbers of eosinophils. Symptomatic relief can frequently be obtained with a 1:5000 solution of adrenalin but this does not result in a cure. Thygeson[1] has recently succeeded in affecting a cure in several cases of limbal vernal by histamine desensitization. Other cases of both limbal and palpebral variety while not completely cured have been much improved. The method used is as follows, to quote from him: "Dilutions are made from Lilly's Histamine Acid Phosphate ampules which are equivalent to one mg. active principle of histamine. Serial dilutions are prepared of 0.1, 0.01, 0.001, 0.0001 and 0.00001 using Coca fluid as diluent. Patient is skin tested using three lowest dilutions and is begun on one-tenth of a c.c. of 0.00001 dilution providing skin test to this dilution has not yielded too great a flare. Dose is increased tri-weekly 0.1, 0.3 and 0.5 whereupon the next stronger dilution is used and the same routine carried out. The final dose reached is usually 0.1 of the 0.1 mg. per c.c. dilution and a maintenance dose of this is given at weekly intervals."

Trachoma though rarely seen in this part of the country should be suspected in all cases of chronic conjunctivitis. The presence of tarsal follicles and pannus (Stage I), of marked follicular hypertrophy with pannus (Stage IIa), of papillary hypertrophy with pannus (Stage IIb), of conjunctival scars with gross pannus (Stage III), or of old healed scars with pannus (Stage IV), are diagnostic of the disease and the presence of inclusion bodies in epithelial scrapings in active trachoma is confirmatory evidence. Peroral administration of sulfonamide over a period of two weeks will usually result in a cure in cases of early acute trachoma. In the late cases of trachoma such therapy is also of great value but exacerbations are frequent, necessitating repetition of such courses. Sulfanilamide does not, however, cause any regression of the cicatricial changes wrought by the disease and is therefore efficacious only in those early cases where scarring has not taken place.

Parinaud's oculo-glandular syndrome poses a problem in etiological diagnosis. The commonest causal agents of this type conjunctivitis with granulations and regional adenopathy are the following organisms: leptothrix, tubercle bacillus, Ducrey's bacillus of soft chancre, treponema pallidum and tularemia. Exceptionally the virus of vaccinia or lymphogranuloma venereum, B. mallei—the organism causing glanders—or the organism of pseudotuberculosis rodentium may give rise to the condition. Once diagnosis has been established by appropriate procedures, general measures should be instituted, if indicated, and locally the granulations should be excised. Where the leptothrix organism or the tubercle bacillus has been found, prompt healing usually follows removal of the granulations; and in tularemia of the oculo-glandular type, healing takes place rapidly as general symptoms subside. A luetic infection is also easily controlled but where other agents are responsible a more protracted course may be expected.

Corneal ulcers are usually divided into two principal types according to location, i.e.: marginal and central. The pathogenic staphylococcus is by far the commonest offender in the causation of marginal ulcers but on rare occasions the diplobacillus as well as other bacteria are incriminated. Allergy may also give rise to ulcers of this type, and many times the cause remains obscure. Central ulcers may also be caused by the staphylococcus but the pneumococcus, streptococcus, Friedlander's bacillus, B. pyocyaneus, the diplobacillus of Petite and the gonococcus are more frequently found to be the organisms responsible. It is this central type of ulcer which responds so dramatically to the use of sulfonamides or penicillin introduced iontophoreti-

cally. Many cases will respond to the local use of these drugs when simply instilled or dusted into the conjunctival sac or when employed in the form of an ointment; but in severe and recalcitrant cases iontophoresis is the method of choice. Where the infection is severe and treatment must be instituted before the etiological agent can be established, iontophoresis may be carried out, using as iontophoresing fluid a solution containing 5 per cent sulfadiazine and from 1000 to 5000 Oxford units of either the calcium or sodium salt of penicillin to the c.c.[5]

The chief exponent of iontophoresis therapy in this country has been von Sallmann and it is he who has popularized this form of treatment. The procedure is simple and may be likened to the industrial process of electroplating. A plate of lead is placed on the patient's back and a wet rag is interposed between that and the patient. To this plate is attached one pole of the iontophoresis outfit while the other pole is attached to the platinum electrode of the iontophoresis cup. The iontophoresis cup is then fitted snugly over the cornea and the iontophoresis fluid introduced into the cup until the platinum electrode is well covered. Whether the active electrode of the iontophoresis cup is to serve as anode or cathode depends upon whether anions or cations are to be driven into the eye. In the case where sulfa drugs or penicillin are to be used, since the sulfa or penicillin ion bears a minus charge and hence will migrate to the positive pole, that pole should be attached to the lead plate while the negative pole should be attached to the platinum coil of the iontophoresis cup. Treatment should be carried out at two milliamperes for four to five minutes. Corneal anesthesia is induced with pontocaine. Between iontophoresis treatments, local instillations of the drugs of choice should be continued.

The response to such a form of treatment is rapid and dramatic. It is not uncommon to find a severe serpiginous ulcer become stationary within twenty-four hours and to show no staining after from 48 to 72 hours. And ulcers caused by other organisms will be found to respond equally as well providing, of course, the organism is sensitive to the drug employed.

A further use of iontophoresis is in the treatment of post-operative cataract infections. Almost without exception these infections are caused by the pathogenic staphylococcus. If the infection occurs early, as most of them do, the anterior chamber should first be irrigated with a solution containing 500 Oxford units of penicillin per c.c. and then after 24 hours iontophoresis should be instituted and treatment continued until all evidence of infection has abated. In cases where the infection has remained in the anterior chamber, the eye can usually be saved; and, indeed, where early spread to the vitreous has occurred, a cure can frequently be effected.

In those instances, however, where deep vitreous infection has taken place, as after perforating injury, iontophoresis is found wanting. In such instances heroic measures are called for. 0.2 c.c. of a solution of penicillin containing 2500 units per c.c. should be injected directly into the vitreous. Such a procedure has been shown to be innocuous in animal experiments[6] and recently at the Institute of Ophthalmology of the Presbyterian Hospital von Sallmann[7] has saved several eyes which would certainly have been otherwise lost.

Dendritic ulcers when improperly treated or when allowed to follow their natural course tend to become chronic and scarring results with considerable visual impairment. The best method of treating such ulcers is to curette the cornea, after anesthetizing with 4 per cent cocaine, until it is completely denuded of epithelium. It should then be painted thoroughly with a 3½ per cent solution of tincture of iodine until it turns a light chocolate brown. Neutralization of the iodine should then be affected with a 4 per cent solution of cocaine and a firm patch applied. In most instances the cornea will completely epithelize after 48 hours and the dendritic lesion will be found to have healed. This form of treatment is valueless in late dendritic cases or in treating disciform keratitis due either to the herpes or vaccina virus.

Allen[8] has recently brought about the cure of dendritic ulcers by employing a course of intravenous sodium iodide. He claims in an as yet unpublished series to have affected cures in 22 cases by administrating this drug intravenously in doses of 2-3 gm. Healing is said to occur after from 3 to 15 injections. I have had no experience with this therapy but Thygeson has employed such treatment in one case and after 12 injections, the lesion is still unhealed.

REFERENCES

1. Thygeson, P.: Personal communication.
2. Gundersen, T.: Convalescent Blood for Treatment of Herpes Zoster Ophthalmicus, *Archives of Ophthalmology* **24**:132-141.
3. Allen, J. H.: Inclusion Blenorrhea, *American Journal of Ophthalmology* **27**:833-846.
4. Braley, A., and Sanders, M.: Treatment of Epidemic Keratoconjunctivitis, *Journal American Medical Association* **121**:999-1000.
5. von Sallmann, L.: Simultaneous Local Application of Penicillin and Sulfacetamide, *Archives of Ophthalmology* **32**:190-192.
6. von Sallmann, L.; Meyer, K., and DiGrandi, J.: Experimental Study on Penicillin: Treatment of Ectogenous Infection of Vitreous, *Archives of Ophthalmology* **32**:179-189.
7. von Sallmann, L.: Personal communication.
8. Allen, J. H.: Cited by Thygeson in personal communication.

503 Professional Building.

Nasal Allergies Require Immediate Care to Avoid Complications.

Nasal allergy, if neglected, is prone to develop into chronic sinusitis, bronchitis, or asthma according to Andrew A. Eggston, M.D., of New York.

"Allergy and sinusitis may exist as separate diseases, but they are frequently intimately associated. Either allergy or sinusitis may exist previous to the other and one may aid in development of the other. In about 60 to 80 per cent of nasal allergy cases there is a definite background of sinusitis, and about the same number of cases of sinusitis show signs of bacterial or other allergy," the author stated in the January issue of *Hygeia,* health magazine of the American Medical Association.

Allergy is a popular, as well as scientific, word for any unusual reaction of the body to a common and generally harmless substance in nature. "Hay fever allergies represent the best example of true allergic diseases of the nose, and they may exist uncomplicated by an infection of the sinuses," Dr. Eggston said. "If neglected, however, they may lead to chronic trouble. One must remember that allergy is a constitutional disease, and that not only the nose but all the tissues of the body will react to an allergic substance. . . .

"Another type of nose allergy is the perennial type, with symptoms any time of the year. This is frequently due to bacteria, house dust, food or animal dusts. . . . Asthmatic patients usually have nasal allergy but it is nearly always in combination with an infected sinus, or sinusitis, an inflammation of the nasal membrane characterized by nasal discharge, headache, and a general feeling of indisposition. In the acute phase of sinusitis, there may be fever. Sinusitis, when due to germs, may become a long drawn out and debilitating affair called chronic sinusitis. Nearly every person with a cold in the nose also has an acute inflammation of the adjoining sinuses. This may cause a cold to be prolonged for days, and characteristically a copious mucous discharge of pus appears."

There is no quick cure for allergy or sinus trouble. Unfortunately, neither the sulfonamide drugs nor penicillin has been very effective in giving relief from allergy or chronic sinusitis. Dr. Eggston suggests, however, that "a person's sensitivity can gradually be reduced to normal by repeated exposures to small hypodermic doses of the substance to which he reacts. It may be necessary to continue this treatment for several years."

Stearns and Winthrop Take Over Fairchild Brothers & Foster Line.

Manufacture and distribution of all but three products of Fairchild Brothers & Foster, New York, has been taken over by Frederick Stearns & Company, Division, Sterling Drug, Inc., Detroit. The three, which will be manufactured and distributed by the Winthrop Chemical Company, Rensselaer, N. Y., are Marinol, pHisoderm and Enzymol.

About fifty other trade marks on the list will be marketed by Stearns as "Successors to Fairchild Brothers & Foster." The leaders are Gastron, Pepsencia, Holadin, and Bile Salts. To make the products, a new department has been added to the Detroit plant.

POLIOMYELITIS—RESULTS OF TREATMENT

CHARLES J. FRANKEL, M.D.,
and
RUTH L. CRALLE, R. P. T.T.,
Department of Orthopedic Surgery, University of Virginia Hospital,
Charlottesville, Virginia.

The University of Virginia Hospital treated fifty-eight cases of infantile paralysis during the 1944 epidemic. These cases ranged from the age of six months to forty-two years. The majority of the cases were in the group from three to twelve years. At that time there was a great deal of discussion concerning the merits of the Kenny treatment as opposed to the so-called "orthodox" therapy.

Our rationale of treatment was presented in this JOURNAL in September, 1944. We concluded in that paper that the Kenny treatment, as a whole, was unnecessary, expensive and required larger numbers of trained personnel than were available and, in the most part, was based on Sister Kenny's personal theories rather than scientific data.

The Orthopedic Service previously had adhered rigidly to the Kenny method in 1943. Our results were indifferent and disappointing.

Recent investigation[2] has shown most of Miss Kenny's concepts to be invalid.

CLINICAL MANIFESTATIONS

All except twelve cases were brought to the hospital after a three weeks' isolation period in selected centers throughout the State. This period of isolation was based on present epidemiological information that the virus can be recovered in the naso-pharynx during the first ten to sixteen days of the disease. Our general hospital had no isolation facilities. We felt that a three week isolation period would at least protect us against public criticism should any new cases develop in this community.

There recently has been a tendency to eliminate a strict isolation technique. Much of this is due to the action taken by the New York City Department of Health. They claim that it is unnecessary to close schools, keep children from camps and quarantine infected cases. It is interesting to note, however, that directly across the Hudson River in New Jersey, extremely rigid quarantine and isolation technique is still demanded. We feel that until more exact information as to the transmission of the virus is available a fairly rigid routine can do no harm. We personally use masks and gowns when approaching the patient during the early stage of the disease. Careful attention was given to the disposal of excreta of patients during their entire stay in the hospital since the virus has been recovered from the stools of the patients as long as six months after the onset of the disease.

Muscle check examinations were done upon the patients soon after their entrance into the hospital. These were repeated monthly. A rigid standard such as is accepted in most of the crippled childrens' hospitals was used. Normal muscles were labeled *N;* muscles below normal that functioned against resistance were labeled *Fair;* muscles which functioned poorly and could not be used against resistance were labeled *Poor;* and those which contracted only weakly were marked *Trace;* totally paralyzed muscles were marked *Zero.*

Muscle spasm was seen in all cases including those who were brought here two months after the onset of the disease. The hamstrings, the back, the heel cords and the posterior cervical group were mostly involved. All of the cases showed muscle weakness in varying degrees and incoordination was demonstrated in several of the late arrivals.

TREATMENT

The patients were placed on beds with fracture and foot boards. Muscle spasm was treated by the application of hot wet packs given four or five times a day and discontinued when pain on stretching disappeared. Neostigmine methyl sulfate and atropine were given intramuscularly and neostigmine bromide orally, using the doses suggested by Kabat and Knapp.[1] Qualitative measurements of range of motion were made and checked within an hour and several hours after the injection. A small series of cases were treated for a period of weeks with the hot packs alone. These cases were not controls inasmuch as the packs were applied in other hospitals.

RESULTS

Fifteen cases were discharged without any residual paralysis or muscle weakness. Twenty-one cases were discharged without braces or splints. These had varying degrees of weakness but muscle power was well balanced. Five cases required bilateral long-leg braces and twelve needed unilateral long-leg braces. Five required shoulder supports. Seven needed unilateral short-leg braces and eleven cases showed varying amounts of spinal deviation. Many of these cases will require surgery later. These results can be considered as just about the same as we used to get using the so-called "orthodox" treatment. There is this exception, however; paralyzed limbs showed less general atrophy and better circulation than after the older treatment.

Hot wet packs are valuable in making the patient comfortable and in relieving the painful stretch reflex.

It is difficult to determine accurately the relative merits of the hot packs *versus* neostigmine. It is our opinion and the opinion of the nurses who gave these treatments that the combination of the two was valuable. Thirty-eight per cent of the cases in which neostigmine was used showed dramatic results within an hour after its use. Eighty per cent showed definite improvement while 20 per cent showed little or no results. The intramuscular route was much more successful in our hands. Twenty-three cases showed good results only after treatment was interrupted from five to seven days and then resumed. Increase in painless passive motion varied from 10 per cent to a complete normal range. Side effects of the drug were few and transient and were quickly controlled by additional use of atropine.

We were pleasantly surprised to find that neostigmine strongly influenced the cases with incoordination.

None of the cases developed permanent contractures. It was part of our routine to give each patient daily physiotherapy; this included a full range of motion for each joint after pain had subsided. Several of our cases came to us after long periods of semi-rigid immobilization in bed. Many were required to sleep in long-leg braces and were given no passive exercises. It was in these cases with extremely stiff joints that neostigmine gave the most striking results.

We feel that a muscle which shows no change in power for three months after treatment has begun must be considered at a stand-still so far as its future prognosis. We applied ambulatory braces or corsets in all cases in which our muscle checks indicated that further progress could not be expected and in which we felt that locomotion could be of benefit. We do not agree that these patients should be hospitalized for years instead of months.

The proper place for an ambulatory child, whether he be in braces or not, is at home. The development of hospital personalities is a social problem of no little importance. When the child is discharged the recommendations and muscle charts are sent to the various counties and home physiotherapy has been instituted where physiotherapists were not available.

All of the cases have been requested to report back to our clinic for periodic examinations.

CONCLUSIONS

1. The application of hot packs and neostigmine is of definite value in the early treatment of poliomyelitis.

2. Muscle spasm may persist for long periods unless treated.

3. Neostigmine is of more value when given intramuscularly and in many cases requires interrupted use.

4. Incoordination is also improved by the use of neostigmine.

5. Early locomotion with or without braces gives the patient a better mental and physical outlook and speeds his rehabilitation.

6. Our end-results so far as paralysis was concerned were no better than with previous methods but the patients did show less atrophy and peripheral circulatory difficulty.

7. Early physiotherapy is of distinct value and should be instituted as soon as pain subsides.

BIBLIOGRAPHY

1. Kabat, H., and Knapp, M. E.: The Use of Prostigmine in the Treatment of Poliomyelitis, *J.A.M.A.* **122**: 989, 1943.
2. Moldover, J.: Physiopathologic Aspect of the Disorders of Muscles in Infantile Paralysis, *J.A.M.A.* **123**: 74, 1943.

TREATMENT OF CIVILIAN CASUALTIES IN MANILA*

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The title—"The Care of Civilian Casualties in Manila"—might better be termed "Lack of Care of Civilian Casualties in Manila" as will be brought out. The following is the impression of events leading up to the liberation of Manila gained by a non-line officer.

The original Luzon landing occurred on January 9 of this year at Lingayen Gulf. The landing had little opposition nor later was there much in front of the rapidly advancing 14th Corps on the right flank. "Eye" or 1st Corps on the left flank was held back due to the fact that the Japs had concentrated their artillery in the mountains to the left of "Eye" Corps. On account of this, the advance of the entire 6th Army was halted until the left flank could be secured.

It was during this lull that Philippine civilians from Manila began arriving behind our lines 90 miles from the city—their unanimous story being that there were no Japs worth speaking of between us and Manila and that the large number of Japs in the city were planning to evacuate. It is interesting that during the present Yamashita trial it has been testified that the Japs were planning to evacuate Manila but could not because of our complete air supremacy which controlled all roads of exit.

After our flank had been secured, the Army advanced rapidly southward, meeting little opposition and thus confirming the intelligence reports of the Philippines. The 37th Infantry and the First Cavalry Divisions then went through the northern sections of Manila with hardly a shot being fired. And then hell broke loose.

I have gone into the above to explain why the Army did not expect many civilian casualties in the city and hence why we were thus caught short.

The Pasig River runs east and west, dividing this formerly beautiful tropical city into northern and southern halves. The Japs fought furiously in the southern half which contained practically all the down-town district, and then began a systematic demolition program. As our own casualties were mounting, we contributed a pretty thorough daily artillery barrage.

It was at this stage that I and two other surgeons were detached from our hospital near Lingayen and were brought to Manila as a team to help care for civilian casualties.

We were then introduced to a problem that was disheartening to say the least. Our place of work was a one-story sprawling hospital in the northern half of Manila which was normally a contagious disease hospital and leper colony of 800 beds.

All of the general hospitals had either been destroyed or were in the section of Manila held by the Japs. Our hospital, San Lazero, contained 1,500 battle casualties. Of these, there were 250 compound fractures, including 54 fractured femurs. Either already present or developing later were 110 cases of tetanus and about 60 cases of gas gangrene. The reason our hospital had been left untouched was because of the type hospital it was, and the Japs were deathly afraid to come inside of its walls.

Buried on the grounds of the hospital was a very adequate amount of medical supplies which had been present and buried at the time that we evacuated Manila in December, 1941. There were a few exceptions to this fortunate medical supply situation. There was no tetanus antitoxin, and we had a most difficult fight to obtain any, as tetanus toxoid was used by the Army, and all Army personnel had previously been immunized.

Our other trouble with supplies was in obtaining plaster. All of our own plaster of Paris had to be rolled by ourselves and even doing this it was difficult as the plaster itself would come in daily and just barely enough for one day's work.

Besides the three doctors, our staff consisted of twelve enlisted medical technicians, eight Philippino doctors, and a reasonable number of Philippino nurses. The medical technicians were intelligent boys, but had, of course, had only first-aid training. The Philippino doctors were all contagious disease experts. This made the training of these doctors in war surgery difficult, and the help which they could give us only fair. The nursing situation was much better as some of them had previously worked in general hospitals.

We had been instructed that we would receive no

*Read before the Roanoke Academy of Medicine.

other help from the United States Army as all other medical personnel on Luzon was engaged in the care of the soldiers, and we could only be left there for a few weeks. Therefore, it was not only a matter of taking care of the patients, but also necessary to train the Philippino doctors so that they could know a few of the principles of war surgery when we were pulled out.

Our two main problems were: First, what cases would receive priority; second, improvement of the dreadful sanitary conditions.

As to the first, it was soon decided that the care of the fractures deserved primary consideration. None of these cases had received any treatment whatsoever, and I mean just exactly that. They had no dressings on their wounds. The fractures had not been splinted and, of course, they had had no debridement, sulfa or penicillin therapy. The abdominal cases had either died before our arrival or had started on the road to recovery. We felt that soft tissue wounds would either get well or had already developed tetanus or gas gangrene. Therefore, we set up five tables in order to debride, set, and immobilize all of these various fractures.

As to the second point mentioned above, that of sanitary conditions, it was so unreal it is hard to describe. There were two patients to one small cot. Others were lying on the floor in the corridors, and all were covered with their own excrement. The filth was unbelievable. In spite of the necessity for further crowding this condition, we took one ward and cleared it of patients, then scrubbed the ward with soap, water, and lysol. and then started treating our patients. After a patient was treated, he was moved to this clean ward, and this gradually relieved a little of the congestion in a second ward. This procedure was carried out throughout the hospital, and all wards were cleared completely, scrubbed, and each patient given a single bed.

We were able to do this by using a few nearby buildings which had formerly not been occupied by patients, obtaining some cots from the Army and by discharging, not to their homes but to the streets of Manila, those patients with minor wounds.

The general principles which we followed out were amputations for any very severe fracture which was badly compounded and infected, while in those in which the infection was not overwhelming, and in which there was not too much loss of bone substance, we performed a thorough debridement and placed the patient in plaster cast. The main reason for following this routine was that these patients were going to be turned over the Philippino doctors later, and they could not possibly care for patients in traction or treat adequately a fulminating osteomyelitis of a long bone.

Fractures were set as best we could as we had no X-ray equipment. We were ashamed to treat our fractured femurs with plaster hip spicas, realizing the horrible results which were bound to ensue, but under the curcumstances this was felt to be the wisest course.

One of the first problems which came up was that of anesthesia. We had a choice of ether or sodium pentothal and, for lower extremities, spinal. Induction with ether is difficult and, if performed properly, time consuming. And we had no nitrous oxide, ethylene, or cyclopropane. If spinals were used, it would take most of the time of the only three trained surgeons to give the anesthesia; so we mixed up every morning a large container of weak sodium pentothal solution. Then we selected the five most capable enlisted men and allowed them to give the anesthetic. You may be sure we warned these men of the many dangers which could be encountered in giving any anesthesia and that pentothal was more vicious than others if only due to the fact that it seemed to be so easy. We also impressed upon them that they were not qualified anesthetists and were only being allowed to give this anesthesia due to force of circumstance. It is to the credit of these men and to the anesthesia that over 300 anesthesias were given without a single complication arising therefrom.

During the first week the three Americans performed all the surgery. During the second week, we turned over an increasing percentage to the Philippino doctors and during the last week they performed it all under our supervision.

As to post-operative care. We did not have the time to follow all these patients; so we concentrated in the same building as the operating room all the seriously ill patients. These received penicillin therapy and were seen by one of us twice a day. The remainder were sent to other wards with orders to receive sulfadiazine or sulfathiazole gr. 15 q.4 h. On a few of the wards the patients received more or less just that, but I am afraid on most wards

the patients received no care except too frequent dressings. We told the Philippino doctors in charge of the wards of the dangers of sulfa therapy and to force fluids, but careful follow-up of the blood and urine was, of course, out of the question.

I do not know what our gross mortality rate was, but it was extraordinarily low, particularly when one considers the conditions under which these patients were being treated. This can be explained by the fact that nearly all these patients had been trapped in Jap-held territory for five to seven days following injury with nothing to eat and little to drink, and therefore only the strong or those with minor injuries had survived. When you consider that 54 compound fractured femurs survived a week without any treatment, it makes you realize the tremendous number who were killed and what another huge group it was who received severe injuries and died before they could be rescued.

Probably the two groups of patients most interesting to us were the gas-gangrene and the tetanus. These patients were isolated in one ward and any surgery performed on this group was done in an isolated small room near this ward. We were very fortunate in our treatment of the gas gangrene, anything but with the tetanus. The gas gangrene was treated with high amputation where possible, antitoxin, and large doses of sulfa therapy. About 80% survived. With the tetanus it was an altogether different and sad story. Our total supply of antitoxin was 200,000 units, not really enough to treat one case adequately. And we had 110 cases. We were assured by the consultants and the Army Surgeon that they had wired for large doses to be flown out from the United States, but none had arrived by the time we were recalled to our units.

We performed a few amputations, debrided some wounds, and gave them all sedation. When we left the hospital, of the 110 cases, four had recovered, about ten were improving, and about 60 had died. The remaining were getting worse or just barely holding their own. As far as I know, no cases of tetanus occurred in American soldiers who were fighting and being wounded in the same environment during this time, thus demonstrating the great efficacy of tetanus toxoid.

Our patients were nearly all Philippinos, but there were some Chinese and Japanese as Manila contains a huge Chinese colony and a fair number of Japanese. Nearly every day some ward would break out in a near riot when a Jap or a pro-Jap Philippino was discovered to be a patient in the ward. Then several of our men would have to go to protect the individual concerned from being literally torn limb from limb.

Perhaps many of you have heard General Romulo when he spoke in Roanoke. He stresses the difference between the U. S. Colonial policy and that of the other great powers and how it has paid in this war by the loyalty of the Philippinos. And he is right. The vast majority are fanatically devoted to the American flag, the national anthem, and in fact to Americans and anything American. And, when you look about you and see the schools, the churches, the public health improvements and realize the progress which these people have made under our supervision during the past forty-five years, you are intensely proud of being an American.

Jefferson Hospital.

Atabrine,

Widely used for treatment of malaria by the armed forces, may now be purchased without a doctor's prescription in retail drug stores throughout the country, according to a ruling by the Food & Drug Administration, Washington, D. C.

Announcing the F. & D. A. decision, the Winthrop Chemical Company, Inc., whose laboratories in Rensselaer, N. Y., make the yellow antimalarial tablets, declared packages with new labels and circulars giving therapeutic and suppressive doses will shortly be ready for distribution.

The drug store packages of Atabrine will contain 15 tablets, sufficient for one course of treatment. Meanwhile, the present label, which reads "To be dispensed only by or on the prescription of a physician," may be disregarded. While the new labeling is indicative of the safety of Atabrine, it should not be interpreted as meaning that laymen are qualified to treat malaria.

TREATMENT OF PUERPERAL MASTITIS

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

Recent literature shows little evidence of the impact of the sulfa drugs and penicillin upon the treatment of puerperal mastitis. Austin (*Amer. J. Obst. & Gynec.* 48:387, 1944) tried an ointment of allantoin 2 per cent, sulfanilamide 5 per cent, and sulfathiazole 5 per cent, in a water miscible base as a prophylactic treatment of the nipples. His results were not impressive. Three out of 212 mothers developed mastitis while still in the hospital and two of these went to abscess formation after leaving the hospital. Fraser (*Brit. M. J.* 1:523, 1944) treated 15 well-developed abscesses with simple aspiration followed by injection of a solution of calcium penicillin. Staphylococcus aureus was the causative agent in all. Pus obtained on the second and subsequent aspirations was sterile and the penicillin was was still active after 48 hours. Five of his cases required surgical drainage. In seven spontaneous drainage occurred. Three cases resolved without drainingе.

It appears that the best prophylaxis is cleanliness in the care of the nipples. The old-fashioned paste of bismuth and castor oil seems to be as good a dressing as any for the nipple. The critical times for developing mastitis are: (1) Before the milk forms. The baby should be allowed to nurse only a few minutes. (2) When the patient leaves the hospital or discharges her nurse. At such time she may become careless in her technic of the care of the nipples. (3) When she resumes street clothes the mother is prone to fold the breasts on the chest with a tight brassiere which interferes with circulation. She should be told to use an uplift brassiere. (4) When the milk supply begins to fail, the baby butts the breast and gums the nipple in his efforts to get an adequate supply. The mother should be warned of this danger and a supplementary feeding should be prescribed. Since the staphylococcus is usually the causative organism, the sulfa drugs or penicillin should be useful in preventing abscess formation, provided the treatment is begun early. This reviewer has had no experience with the latter, but sulfanilamide has served him well in a number of instances.

When there is pus formation, aspiration combined with Bier's hyperemia is to be preferred to incision and drainage. The treatment is less painful, the cure takes less time, and there is no deformity. The resultant scar is a mere dot and causes no trouble in subsequent lactations. With a fine needle, 1 per cent procaine is injected in the route to the abscess cavity. A 14 gauge needle is then introduced, and the cavity is evacuated with a Bier's cup. In the light of Fraser's experience it might be well to wash out the cavity with a solution of penicillin before removing the needle. The aspiration is repeated daily until there is no further drainage, which usually occurs in three or four days.

American Board of Obstetrics and Gynecology.

The general oral and pathology examinations (Part II) for all candidates will be conducted at Chicago, from Monday, May 6, through Saturday, May 11. The Palmer House in Chicago will be the headquarters for the Board. Candidates for *re-examination* in Part II must make written application to the Secretary's Office not later than April 15, 1946. Candidates in Military or Naval Service are requested to keep the Secretary's Office informed of any change in address. Deferment without time penalty under a waiver of our published regulations applying to civilian candidates, will be granted if a candidate in Service finds it impossible to proceed with the examinations of the Board.

Applications are now being received for the 1947 examinations. For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh 6, Pennsylvania.

PUBLIC HEALTH

I. C. RIGGIN, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for February, 1946, as compared with the same month in 1945, and for the period of January through February, 1946, compared with the same period in 1945, follows:

	Feb. 1946	Feb. 1945	Jan.-Feb. 1946	Jan.-Feb. 1945
Typhoid and Paratyphoid Fever	4	5	11	9
Diarrhea and Dysentery	116	151	221	393
Measles	948	190	1,488	250
Scarlet Fever	274	554	540	913
Diphtheria	44	36	107	62
Poliomyelitis	0	4	1	8
Meningitis	24	33	60	56
Undulant Fever	5	1	7	3
Rocky Mountain Spotted Fever	0	0	0	1
Tularemia	5	8	22	10

VITAL STATISTICS IN MEDICAL SCIENCE, PUBLIC HEALTH AND SOCIAL RESEARCH

The public generally, and in some instances members of the medical profession, have hazy ideas regarding the value of vital statistics. For this reason there follows a detailed statement of the numerous uses to which statistics of this character are put:

1. Vital statistics are of value to the *individual physician and to medical research* in providing the essential facts concerning birth, death, stillbirth, and infant mortality.

Mortality statistics indicate the increase or decrease in the number of deaths, the causes, the geographic locations, and the sex, age and color distribution of decedents. Of special interest to physicians is the study of vital statistics relating to the complications of pregnancy and labor, of causes peculiar to early infancy, and the frequency and cause of stillbirth. In medical research, mortality data are needed in the study of the etiology and epidemiology of specific causes, to show fatality rates, geographic occurrence, time-trends, and the risk of death from various causes at different ages among the sexes and races.

Birth statistics inform the physician of the number of births from year to year, the geographic distribution, and the proportion occurring in hospitals and the number of deliveries without medical attendance.

2. Since vital statistics define the problems and furnish a means of evaluating results of *public health work,* they are a necessary foundation upon which to base public health programs.

Death statistics are an aid to health officials in determining the required scope of campaigns against the principal causes of death. They furnish the health officer data on the age, sex, race, cause of death, and residence of decedents, thereby making possible a comparison of general health conditions in different areas. They also provide an index for the proper allocation of funds for public health activities.

Birth statistics indicate to health authorities the areas in which the greatest need exists for maternal and infant-care programs. From birth certificates, information is obtained by State and local health departments as to persons who should receive literature on infant care, where to find postnatal cases, and other facts of value for infant and maternal welfare.

3. In *economic and sociological fields,* uses for vital statistics are rapidly developing.

In population research, birth and death statistics are essential in making population estimates for intercensal years, and to measure the fertility and mortality of various racial, economic and social groups.

In programs for the prevention of accidents and occupational mortality risks, death statistics are required.

For sociological studies conducted in the colleges and elsewhere the need exists for birth, death, marriage and divorce statistics.

For administrative planning in business enterprises, statistical data on births, deaths, and marriages are requested.

Lastly, natality and mortality statistics are used in the preparation of life tables by insurance companies and are becoming of increasing value in long-range housing programs, school enrollment, social-security plans, and in marketing and consumer research.

MISCELLANEOUS

Constructive Program of the American Medical Association for the Improvement of Medical Care.

The Board of Trustees of the American Medical Association and the Council on Medical Service of the Association at a recent meeting in Chicago have taken a long step toward protection of the American people against the costs of sickness through participation in a voluntary prepayment sickness plan now developed under the authority of the American Medical Association.

The fundamental step in the development of this plan was the establishment of standards of acceptance for medical care plans which have the approval of the Council on Medical Service of the American Medical Association. Any plan which meets the standards of the Council will be entitled to display the seal of acceptance of the American Medical Association on its policies and on all of its announcements and promotional material. In order to qualify for acceptance, the prepayment plan must have the approval of the state or county medical society in the area in which it operates. The medical profession in the area must assume responsibility for the medical services included in the benefits. Plans must provide free choice of a qualified doctor of medicine and maintain the personal, confidential relationship between patient and physician. The plans must be organized and operated to provide the greatest possible benefits in medical care to the subscriber.

Medical care plans may be in terms of either cash indemnity or service units, with the understanding that benefits paid in cash are to be used to assist in paying the costs incurred for medical service. The standards also include provisions relative to the actuarial data that are required, systems of accounting, supervision by appropriate state authorities and periodic checking and reporting of the progress of the plan to the Council.

Coincidentally with the announcement of these standards of acceptance, there was organized, as a voluntary federation, an organization known as Associated Medical Care Plans, Inc. This independent association will include as members all plans that meet the minimum standard of the Council on Medical Service of the American Medical Association. The Associated Medical Care Plans will undertake to establish coordination and reciprocity among all of these plans so as to permit transference of subscribers from one plan to another and use of the benefits in any state in which a subscriber happens to be located. Under this method great industrial organizations with plants in various portions of the United States will be able to secure coverage for all of their employees. Moreover, it will be possible for the Veterans Administration, welfare and industrial groups as well as government agencies, to provide coverage for the people in any given area through a system of national enrollment. In addition, the Associated Medical Care Plans, Inc., will undertake research and the compilation of statistics on medical care, provide consultation and information services based on the records of existing plans and engage in a great campaign of public education as to the medical service plan movement under the auspices of state and county medical societies.

The Board of Trustees of the American Medical Association also announced the establishment under its Council on Medical Service of a Division of Prepayment Medical Care Plans with a director and a staff who will administer the activities of the Council on Medical Service related to the promotion and development of medical care plans in all of the states.

In announcing its proposals for a nation-wide provision of sickness insurance on a mutual nonprofit basis, the Association through its President and the Board of Trustees authorizes the publication of its complete health program with the ten points, which include the development of services in the field of preventive medicine, maternal and child health, voluntary prepayment plans for protection against the costs of sickness, compensation for loss of wages due to illness, the care of the veteran and the development of a high standard of housing, nutrition, clothing and recreation. The American Medical Association last June through its Board of Trustees and Council on Medical Service announced a 14-point program to improve the health and medical care situation in the United States. In October 1945 the interpretation of these 14 points and methods of implementation were adopted by the Council on Medical Service. In December 1945, the House of Delegates approved the whole program, suggested its rearrangement and directed the Board of Trustees

to keep the program constantly up-to-date so that it will stay at least even with and, if possible, a step ahead of the needs of the public.

With this in mind the Board of Trustees has adopted a restatement of the 14 point program, which clarifies still further the position of the American Medical Association on some of these points and brings into the program more definitely such matters as maternal and child welfare, medical research, the medical care of the veteran and the part to be played by the voluntary health agencies.

This restatement follows:

NATIONAL HEALTH PROGRAM OF THE AMERICAN MEDICAL ASSOCIATION

1. The American Medical Association urges a minimum standard of nutrition, housing, clothing and recreation as fundamental to good health and as an objective to be achieved in any suitable health program. The responsibility for attainment of this standard should be placed as far as possible on the individual, but the application of community effort, compatible with the maintenance of free enterprise, should be encouraged with governmental aid where needed.

2. The provision of preventive medical services through professionally competent health departments with sufficient staff and equipment to meet community needs is recognized as essential in a health program. The principle of federal aid through provision of funds or personnel is recognized with the understanding that local areas shall control their own agencies as has been established in the field of education. Health departments should not assume the care of the sick as a function since administration of medical care under such auspices tends to a deterioration in the quality of the service rendered. Medical care to those unable to provide for themselves is best administered by local and private agencies with the aid of public funds when needed. This program for national health should include the administration of medical care including hospitalization to all those needing it but unable to pay, such medical care to be provided preferably by a physician of the patient's choice with funds provided by local agencies with the assistance of federal funds when necessary.

3. The procedures established by modern medicine for advice to the prospective mother and for adequate care in childbirth should be made available to all at a price that they can afford to pay. When local funds are lacking for the care of those unable to pay, federal aid should be supplied with the funds administered through local or state agencies.

4. The child should have throughout infancy proper attention, including scientific nutrition, immunization against preventable disease and other services included in infant welfare. Such services are best supplied by personal contact between the mother and the individual physician but may be provided through child care and infant welfare stations administered under local auspices with support by tax funds whenever the need can be shown.

5. The provision of health and diagnostic centers and hospitals necessary to community needs is an essential of good medical care. Such facilities are preferably supplied by local agencies, including the community, church and trade agencies which have been responsible for the fine development of facilities for medical care in most American communities up to this time. Where such facilities are unavailable and cannot be supplied through local or state agencies, the federal government may aid, preferably under a plan which requires that the need be shown and that the community prove its ability to maintain such institutions once they are established. (Hill-Burton bill.)

6. A program for medical care within the American system of individual initiative and freedom of enterprise includes the establishment of voluntary nonprofit prepayment plans for the costs of hospitalization (such as the Blue Cross plans) and voluntary nonprofit prepayment plans for medical care (such as those developed by many state and county medical societies). The principles of such insurance contracts should be acceptable to the Council on Medical Service of the American Medical Association and to the authoritative bodies of state medical associations. The evolution of voluntary prepayment insurance against the costs of sickness admits also the utilization of private sickness insurance plans which comply with state regulatory statutes and meet the standards of the Council on Medical Service of the American Medical Association.

7. A program for national health should include the administration of medical care, including hospitalization, to all veterans, such medical care to be provided preferably by a physician of the veteran's choice with payment by the Veterans Administration

through a plan mutually agreed on between the state medical association and the Veterans Administration.

8. Research for the advancement of medical science is fundamental in any national health program. The inclusion of medical research in a National Science Foundation, such as proposed in pending federal legislation, is endorsed.

9. The services rendered by volunteer philanthropic health agencies such as the American Cancer Society, the National Tuberculosis Association, the National Foundation for Infantile Paralysis, Inc., and by the philanthropic agencies such as the Commonwealth Fund and the Rockefeller Foundation, and similar bodies have been of vast benefit to the American people and are a natural outgrowth of the system of free enterprise and democracy that prevail in the United States. Their participation in a national health program should be encouraged and the growth of such agencies when properly administered should be commended.

10. Fundamental to the promotion of the public health and alleviation of illness are widespread education in the field of health and the widest possible dissemination of information regarding the prevention of disease and its treatment by authoritative agencies. Health education should be considered a necessary function of all departments of public health, medical associations and school authorities.

BOOK ANNOUNCEMENTS

A Future for Preventive Medicine. By EDWARD J. STIEGLITZ, M.S., M.D., F.A.C.P. New York. The Commonwealth Fund. 1945. xvi-77 pages. Price $1.00.

As the world has been undergoing changes, so has medicine in all of its phases. This book suggests a progressive program for the field of preventive medicine in the future.

The author suggests the concept of "construction of health" rather than the usual idea of "prevention and cure of disease" as being a better definition of the preventive medicine that is to be.

A brief review of the accomplishments of preventive medicine in the United States during the past forty years shows: 1) an increase in the life expectancy of the average individual; 2) a decrease in the incidence of numerous diseases, many common to early life, as a result of advancements in environmental control, immunization programs and development of therapeutic agents; and 3) an increase in the incidence of those ailments frequently associated with age and senescence, the so-called degenerative diseases. Some pertinent factors are noted.

While cognizant of many problems, the author predicts that the preventive medicine of the future may well embrace the wider field of improving the health of individuals of all ages. This is to be accomplished: 1) by maintaining the procedures now employed in preventive medicine and improving them whenever possible; and 2) by postponing, if not preventing, the onset of the illnesses related to the stresses of living by developing and improving the techniques for determining their etiology, making early diagnoses and providing effective therapy. Research, education of the public and conducting periodic health surveys of individuals would be essential features of the program. Political control would destroy initiative and suppress imagination although public moneys would probably be necessary to insure the success of the program even though not covering the full cost.

The author presents the material in an understandable and thought-provoking manner. General practitioners are definitely concerned with preventive medicine, many having contributed to its present development. Is it not logical to concentrate on the newer problems in the field and, at the same time, hold fast to the ground already won? Need the taboos, crowded schedules, lack of specific training and inadequacy of techniques for detecting early pathological changes at the present time make us feel that a forward looking program is impracticable or unethical?

Here a reasonable course of advancement in preventive medicine is outlined. The author discusses certain attendant problems, lists some attributes which practitioners will need to acquire and outlines a few procedures for developing his program. Men of medicine may read and ponder the contents of the book with great advantage to themselves and to those whom they would serve.

D. I. FARNSWORTH, M.D.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President ..... MRS. P M. CHICHESTER, Abingdon
President-Elect ..... MRS. J. E. HAMNER, Petersburg
Recording Secretary .. MRS. NATHAN SCHUMAN, Alexandria
Corresponding Secretary .. MRS. L. C. BRAWNER, Richmond
Treasurer ..... MRS. REUBEN F. SIMMS, Richmond

Suggested Program of President.

TO THE PRESIDENTS OF THE AUXILIARIES TO THE COUNTY MEDICAL SOCIETIES OF VIRGINIA:

We are now approaching our mid-year mark. Many of you will have very few meetings between now and our next annual meeting.

Will you please check your programs to see how well you have been able to carry out the recommendations of our National Auxiliary as printed in the August 1945 issue of the *Bulletin*, your State President in the December 1945 issue of the VIRGINIA MEDICAL MONTHLY and those of your State Chairmen?

Paramount among the recommendations were those to read the Constitution and By-Laws of our State Auxiliary at one meeting each year that the members may discuss these and become more familiar with the objectives and policies of the Auxiliary; to hold one health meeting a year in cooperation with other groups if this meets with the approval of the local Medical Society; to subscribe to the *Bulletin of the Woman's Auxiliary to the American Medical Association;* and to promote the circulation of *Hygeia* as a means of health education.

It is suggested that one meeting during the spring shall be designated as "Doctor's Day". The program for this day shall include at least five minutes for commemorating the work of doctors. But tribute to the medical profession may be expressed in many other ways, from flowers on the doctor's desk to parties, editorials and recognition in the Churches of the physician's services to the community. The Medical Society should be consulted about the latter.

As we review the past let us plan for the future.

Carlyle said "The goal of yesterday will be the starting point of tomorrow."

MARIE C. CHICHESTER
(MRS. P. M.)

LOCAL AUXILIARIES

Warwick.

The Auxiliary to the Warwick County Medical Society is doing a far-reaching piece of work, under the leadership of Mrs. W. R. Payne, from a health and public relations standpoint. The Auxiliary sponsors classes for expectant mothers in the city of Newport News and in Warwick County. The classes are taught by the Public Health Nurses in the two centers under the direction of the Public Health doctors. The Auxiliary provides the layette and equipment needed for the classes and assists when called upon by the nurses.

Norfolk.

The January meeting of this Auxiliary was held January 22 in the library of the Medical Arts Building, Mrs. C. M. McCoy, president, presiding. This was in the form of a public relations meeting and members of various women's organizations in Norfolk were special guests.

Dr. George A. Duncan, who was for two and one-half years surgeon in charge of orthopedic work in a General Hospital in Italy, addressed the Auxiliary.

In its business session the Auxiliary made plans for a dinner it will sponsor on February 22, in honor of doctors who served in the armed forces now returned to private practice.

Mrs. E. Roy Altizer was appointed legislative chairman.

The members were asked to cooperate with the Norfolk Junior League in its canned foods campaign for the United Nations Relief and Rehabilitations.

Mrs. James W. Anderson read a letter from the Norfolk Chapter, American Red Cross, expressing its appreciation for the Auxiliary's contributions at Christmas time.

This Auxiliary sponsored a dinner February 22, at the Norfolk Yacht and Country Club, in honor of the returned doctors who served in the armed forces. A social hour preceded the dinner, Mrs. Richard Peake and Mrs. Stark Sutton presiding at the punch bowl. Mrs. H. W. Rogers pronounced

the invocation. Mrs. C. M. McCoy, president of the Woman's Auxiliary to the Norfolk County Medical Society, welcomed the guests and Dr. Foy Vann, president of the Norfolk County Medical Society, introduced the doctors who have served in the armed forces. Dr. W. B. Martin spoke in behalf of the Service doctors, expressing how good it was to be back.

Mrs. Charles Lupton, president-elect of the Woman's Auxiliary to the Norfolk County Medical Society, presented the Medical Society with three books in observance of "Doctor's Day". These were accepted by Dr. Mallory Andrews.

The Granby High School Choral Club Sextette, Miss Agnes Bothne, director, entertained with a delightful musical program.

There were forty-three doctors from the Norfolk County Medical Society who served in the armed forces, twenty-seven (27) of these these having returned to private practice.

The affair was arranged by Mrs. W. E. Butler, social chairman, and her committee: Mrs. H. W. Rogers, Mrs. R. M. Reynolds, Mrs. C. C. Cooley and Mrs. M. F. Brock.

(MRS. M. F.) CLARA P. BROCK,
Chairman, Press and Publicity.

Northampton-Accomac.

Mrs. S. S. Kellam of Cape Charles presided at the quarterly meeting of this Auxiliary on January the 8th, following luncheon at the home of Mrs. C. E. Critcher in New Church. After a short business session, a most interesting and instructive talk on "Medicine in Japan" was given by Mrs. Harry H. Monroe, wife of the Presbyterian minister at Cape Charles.

The Spring meeting will be held on April the 9th, at the home of Mrs. Fred Edmonds in Accomac.

CATHERINE R. TROWER (MRS. HOLLAND),
Chairman, Press and Publicity.

Alexandria.

The February meeting of this Auxiliary was held at Carter Hall, Alexandria, on the 4th of the month, with Mrs. S. M. Novak presiding. Mrs. H. A. Latane gave an interesting report on the mid-Winter meeting of the State Board. A bridge party was planned for the Spring as the main project of the year, and it was voted to contribute $10.00 to the Jane Todd Crawford Memorial Fund, $5.00 to the Maintenance Fund, and $25.00 to the U. S. O. supper. A social hour followed the meeting.

ZELLA L. ARNETTE (MRS. C. E.),
Press and Publicity Chairman.

"Painless" Childbirth Facts Explained to Mothers.

From the beginning of time women have feared childbirth. Old wives' tales, back fence gossip, and ill-advised remarks and suggestions of friends and relatives have caused women to fear childbirth. To allay these fears in the minds of thousands of expectant mothers, The Upjohn Company, manufacturers of pharmaceuticals, has released the thirteenth health message in the "Your Doctor Speaks" educational health campaign. Appearing in leading magazines with circulations running into many millions, this message of hope will direct expectant mothers to their doctor for the helpful knowledge which is readily available.

The handsome painting of a mother and child by S. Simkhovitch, well-known American painter, which illustrates the message, is a charming portrayal of maternal affection. The painting is included, with others used to illustrate the messages, in a traveling exhibition being circuited to museums throughout the nation.

Erection of New Army Medical Library Building Planned.

Plans which are now under way for the erection of a new building for the Army Medical Library will be furthered this spring when a request for funds will be included in the War Department estimate for the fiscal year 1947, scheduled to come before Congress.

The building, which architects estimate will cost $10,000,000, will be located on land named as part of the proposed postwar development of East Capitol Street from the National Capitol eastward to Anacostia. A board to review all matters relating to the new building has been set up.

Editorial

The Place of Postpartum Examination in Cancer Prevention

APRIL is Cancer Control Month. The outlook for the control of cancer is definitely promising. The Statistical Bulletin of the Metropolitan Life Insurance Company states that there is definite evidence that cancer patients are seeking medical care earlier in the course of the disease and that their chances of survival have improved materially. The Bulletin for July 1945 published an interesting table showing the trend of cancer mortality, by site, among white males and white females of their policy-holders between the ages of 1 and 74. The rates were adjusted to discount the effect of the aging of the group. In this table the death rates are per 100,000. In the five year period 1911-1915, the rate for cancer of the female genital organs was second only to that of cancer of the stomach, and/or liver. It was 26.5 for the genital organs as compared to 30.9 for cancer of the stomach and/or liver in females and 33.5 in males. In 1941-1944 the rates had dropped to 24 for males with cancer of the stomach and/or liver and 14.3 for females with cancer of the stomach and/or liver, but only to 21.6 for cancer of the female genital organs. Cancer of the female generative organs now leads all other forms of cancer deaths among females.

This brings into focus at once the importance of postpartum examinations. Cancer of the cervix is the commonest form of cancer of the female genital organs and cancer of the cervix almost without exception occurs only in parous women. The need for periodic examination should be stressed in every cancer prevention campaign. The group that needs this most is the group of women who have borne children.

Women are beginning to realize the importance of postpartum examinations. At four to six weeks after the birth of the baby a survey should be made of what damage, if any, the birth of the baby has caused. Malpositions can best be corrected at this time and infections of the cervix can be treated. Many women show a transient hypertension in the puerperium and not a few are anemic. In addition general hygienic matters should be discussed, including the timing of future pregnancies. The importance of periodic examinations should be stressed and the patient should be urged to form the habit of periodic health examinations. There is no better time for such propaganda.

The Treatment of Placenta Previa

JAGGARD'S dictum, that there is no expectant plan of treatment for placenta previa, has been accepted unquestioned by the profession. The fetal mortality has been high regardless of whether the baby was delivered by cesarean section or *per vaginam.* Before the time when hospitals became readily available the general practitioner treated these emergencies in various ways, packing, bags, accouchement forcé, etc. Now he usually packs the vagina and sends the patient to the hospital. The editor has always questioned the wisdom of such treatment and for a number of years has asked at medical meetings if anyone had ever seen a patient bleed to death at her first warning hemorrhage. He has yet to hear of such a case. The vaginal pack is worse than useless. It does not control the bleeding; it may even make it worse, and it certainly increases the risk of infection. Recently, Herman Johnson of Houston has questioned the present methods of treating placenta previa as an obstetrical emergency.

C. H. Macafee, who has had charge of all the cases of placenta previa in the Royal Maternity Hospital in Belfast since 1937, studied this question from the standpoint of

fetal mortality. He had two main objectives: (1) to reduce the fetal mortality without unfavorably affecting the maternal death rate, and (2) to preserve an open mind with regard to the appropriate treatment of a particular case. He is a strong advocate of a vaginal examination in every case of suspected placenta previa, but the time of the examination must be carefully chosen. In order that the patient be carried as close to term as possible in the interest of the baby, the vaginal examination should not be done until a decision is to be made as to the method of delivery. It has been his experience that a severe hemorrhage rarely occurs unless a vaginal examination is done. There has been nothing in his experience to confirm the belief that recurrent hemorrhages tend to lead up to a catastrophic hemorrhage. He is convinced that it is not necessary to keep a primigravida with placenta previa in a hospital, provided she is within reasonable distance of the hospital and is warned not to permit any vaginal examination before admission.

He reports 174 cases of placenta previa, proven by vaginal examination. One mother was lost. The gross fetal mortality was 23.5 per cent. In the five years previous to the change in policy 76 cases were admitted to the same hospital. The maternal mortality in these cases was 2.6 per cent and the fetal mortality was 51.3 per cent. In the last 47 cases of Macafee's series the average weight of the baby was 6 pounds 12 ounces and the mortality was 6 per cent, whereas in the first 47 cases before the minds of the staff could be rid of Jaggard's dictum completely, the average weight of the baby was 5 pounds 2 ounces, and the mortality was 47 per cent. Such figures are impressive and make us wonder if we should not revise our teaching in regard to the treatment of placenta previa.

Medical Examiner System for the State of Virginia

WHEN Governor Tuck signs Senate Bill Number 64, a bill to revise the laws of Virginia so as to provide a modern medical examiner system for investigating deaths arising under suspicious or unusual circumstances, Virginia will have one of the best laws in the country. The details of the bill as originally prepared were discussed in the House of Delegates of the Medical Society of Virginia in Roanoke in 1943 (*Va. Med. Mo.* 70:627, 1943), and the revised bill as passed contains substantially the same provisions. The advantages of the Medical Examiner System over the old Coroner System were discussed in an editorial by Dr. Moritz (*ibid:* 70:164, 1943). The bill which the Legislature passed at its closing session provides the ways and means for adequately investigating all sudden, unexpected, unattended deaths, and those occurring under suspicious circumstances. It has been the experience elsewhere that many suspicious deaths are due to natural causes and occasionally the reverse is true. We will now be able to have the whole truth. Dr. Wyndham Blanton, chairman, and his committee, Drs. M. B. Beecroft, Kenneth Graves, J. E. Wood, Jr., E. G. Scott, J. S. Scherer, W. D. Kendig, G. C. Tyler, G. C. Williams, W. O. Bailey, A. B. Hodges, S. H. Garst, P. W. Miles, are to be congratulated on the successful outcome of their efforts.

The Army Medical Library and Its Cramped Quarters

THE Army Medical Library renders greater service to the Medical Profession than any Federal Institution. Unquestionably it is the greatest medical library in the world. Its vast store of knowledge is open to every doctor in the country. Any book can be consulted if one cares to pay a visit to Washington, and the majority of the

books are available through loans to local libraries. In 1939 Colonel Harold W. Jones broadened the Library's sphere of usefulness by inaugurating a microfilm service. With this service the doctor does not need the intermediary of a local library, if he knows what he wants. And that brings up the second and even greater service that the Army Medical Library renders the Medical Profession. In 1876 Colonel Billings began the stupendous task of furnishing a classified bibliography of medical literature, in the form of the Index Catalogue of the Surgeon General's Library, and the Index Medicus. The first volume of the Index Catalogue appeared in 1880 and the last volume, Volume IX of the fourth series, was issued in 1945. The Index Medicus appeared monthly from 1879 until 1927 except for a hiatus of three years (1900-1902). In 1927 the American Medical Association took over the Index Medicus and with the cooperation of the Army Medical Library has published the Quarterly Cumulative Index Medicus until the present time. The most recent venture in bibliographical service of the Army Medical Library is "Current List of Medical Literature". This is mailed out weekly to subscribers, and the doctor may now keep up with medical literature as it is published.

The Library is disgracefully housed. The editor has had the privilege of showing many distinguished medical visitors to this country through the Library. Their reaction is almost always the same. They marvel at the wonderful collection, but they cannot understand how a great nation can treat one of its great institutions so niggardly. The present building was completed in 1887. In spite of the tremendous increase in the activities of the Library, the building remains the same. The lack of space is beginning to show not only on the books but also in the service the Library is able to render. There was a time when one could always count upon finding everything he wanted in the Library. It was a distinct shock some ten years ago, when we wanted to see Hermann's *Die Eklampsie und ihre Prophylaxe,* and were told that the Library did not have a copy. Later on some of our requests were marked "cannot be located". This happens more frequently now, and can be readily understood when one learns of the overcrowded condition of the building.

Before World War II plans were made to remedy this situation. Congress passed a bill authorizing a new Library and Museum Building to be located on Capitol Hill. It also appropriated $130,000 for plans and specifications to be drawn. This was done, and hearings were in progress before a committee in Congress advocating a new Army Medical Library Building at a cost not to exceed $4,750,000, when the war broke out. This changed everything. Some 90,000 irreplacable books were moved to Cleveland for safekeeping, and incidentally for much needed repairs. These volumes rest contentedly in fireproof, air-conditioned quarters, and are quite accessible, if one goes to Cleveland. It must, however, add considerably to the administrative difficulties of the Library for its foundation to be in Cleveland and its working parts to be in Washington.

Congress is now being asked for $10,000,000 for a new medical library building. Increased costs and enlargement of the original plans account for the higher figure. Hearings before the Budget and Congressional Committees are soon to be had. It is extremely important for all doctors to let their Congressmen know what the Army Medical Library means to them.

Societies

The Wise County Medical Society

Met February 28th in the Appalachian Hotel, Appalachia, as guests of Dr. C. B. Bowyer. A banquet, with all the trimmings, was enjoyed by everyone, following which the program was presented. Dr. H. H. Howze, Norton, read a paper on "Some Precautions in the Administration of the Sulfa Drugs" and showed the result of study and analysis of a number of cases treated in Norton General Hospital for complications following this treatment. Dr. F. S. Givens, Norton, spoke on "Distribution of Barbiturates." "Treatment of Burns" was the subject of Dr. Rupert E. Kelly who gave all the latest effective remedies and also told in detail why some of the recent treatments have been discarded. A full discussion followed the presentation of all these subjects.

At the business session, the following officers were elected: President, Dr. J. D. Culbertson, Coeburn; vice-presidents, Drs. B. C. Henson, Roda; Glenn T. Foust, Jr., Norton; and F. S. Givens, Wise; secretary-treasurer, Dr. T. J. Tudor (re-elected), Norton. Dr. H. H. Howze of Norton was elected to the Board of Censors. New members admitted at this time are Dr. G. R. Evans of Dunbar and Dr. G. T. Foust, Jr. of Norton.

The Society will be entertained by Dr. C. L. Harshbarger and his staff at the Norton General Hospital in Norton in April.

The Williamsburg-James City County Medical Society

Held a business meeting at the Williamsburg Lodge on February the 15th. Dr. Henry E. Davis, Williamsburg, was elected president for the coming year, to succeed Dr. A. M. Sneed of Toano, retiring president. Dr. J. R. Parker of Providence Forge was elected Vice-President, and Dr. E. Beamer Maxwell of Williamsburg was re-elected Secretary-Treasurer.

During the past few years it has been difficult for all members to attend the meetings, but many interesting programs have been presented. It is hoped that a more active society can be developed with the pressure of work lessening.

The society feels that it has been most fortunate in the fine support and active interest from Dr. J. E. Barrett and his staff at the Eastern State Hospital, of which the Secretary-Treasurer is a member. The group extended congratulations to the State of Virginia in keeping Dr. Barrett and hopes that he will continue to be an active member of the local society.

Roanoke Academy of Medicine.

On March the 4th, the Academy held a dinner meeting at Hotel Roanoke. The guest speaker for this occasion was Dr. Donald G. Anderson, Dean of Medicine at the Boston University School of Medicine, whose subject was "Indications for, and the Dosage of Penicillin". This was the only paper on the program and was followed by a question and answer period.

Dr. T. J. Hughes and Dr. George S. Bourne, both of Roanoke, are president and secretary, respectively, of the Academy.

Rockingham County Medical Society.

According to notice just received, Dr. E. B. Miller, Elkton, is president, and Dr. William H. Nicholson, also of Elkton, is secretary-treasurer of this society.

Norfolk County Medical Society.

Dr. Kenneth L. Pickrell, Associate in Surgery and Head of the Division of Plastic Surgery at Duke University School of Medicine, Durham, N. C., was guest speaker before this Society at its meeting on February the 25th, his subject being Plastic Surgery.

Virginia Peninsula Academy of Medicine.

At the regular meeting of the Academy on March 18th, Dr. Ruth Whittemore, Department of Pediatrics, Johns Hopkins Hospital, spoke on the Surgical Treatment of the Tetralogy of Fallot. Dr. Harvey G. Bland presided and there was an attendance of seventy-eight. Dr. C. D. Bradley is secretary-treasurer.

News

Medical College of Virginia.

The one hundred ninth commencement exercises of the Medical College of Virginia were held in Richmond on March 22nd. The commencement address was made by J. Earl Moreland, A.M., LL.D., President of Randolph Macon College, Ashland. The Honorary Degree of Doctor of Science was awarded to Colonel John Ruxton Wood, Medical Corps, Army of the United States, Chief, Medical Division, Chemical Warfare Service.

There were a total of one hundred eighty-three graduates, composed of eighty-nine in medicine, thirty-one in dentistry, thirteen in pharmacy, and fifty in nursing. The following are graduates in Medicine with hospital appointments:

MEDICAL COLLEGE OF VIRGINIA, Richmond—Drs. Richard Norton Baylor, Richmond; David Milton Dumville, Richmond; Joseph Barnette Earnhardt, Greensboro, N. C.; Abraham Jacob Freund, Tappahannock; James Riley Gatherum, Athens, W. Va.; Richard Lemmon Hughes, Glen Jean, W. Va.; George William Hurt, Roanoke; Randolph Mott Jackson, Leesburg; Paul Alvin Robinson, Walton, Ky.; Robert Lee Sommerville, Clarksburg, W. Va.; Marca Isabel Taliaferro, Richmond; Franklin Chandler Turner, Portsmouth; Charles Newton Van Horn, Hamlin, W. Va.; and Richard Kennon Williams, Richmond.

STUART CIRCLE HOSPITAL, Richmond—Drs. Edward Mitchell Eppes, Richmond; and Henry Carl Messerschmidt, Jr., Richmond.

JOHNSTON-WILLIS HOSPITAL, Richmond—Drs. Robert Emerson Fultz, Butterworth; and Horace Eugene Perkins, Richmond.

THE TUCKER HOSPITAL, Richmond—Dr. Charles Elroy Llewellyn, Jr., Richmond.

DEPAUL HOSPITAL, Norfolk—Drs. Alice Swecker Huff, Roanoke; Samuel Hammond Huff, Jr., Roanoke; and Richard Courtney Reed, Norfolk.

UNITED STATES NAVAL HOSPITAL, Norfolk—Dr. Robert Daniel Keeling, Keysville.

UNITED STATES MARINE HOSPITAL, Norfolk—Dr. James Harry Bocock, Richmond.

LEWIS-GALE HOSPITAL, Roanoke—Drs. William Harper Barney, Altavista; and Matthew Lyle Lacy, II, Harrisonburg.

UNIVERSITY OF VIRGINIA HOSPITAL, Charlottesville—Dr. John Alexander Gill, Richmond.

UNITED STATES NAVAL HOSPITAL, Portsmouth—Dr. William Byrnes Cecil, Dublin.

OHIO VALLEY GENERAL HOSPITAL, Wheeling, W. Va.—Drs. John Paul Bing, Mt. Hope, W. Va.; and Richard Custer Wallace, Charleston, W. Va.

CHARLESTON GENERAL HOSPITAL, Charleston, W. Va.—Drs. Robert Ellsworth Gibson, Charleston, W. Va.; and James Dolan Mathias, Mathias, W. Va.

CHESAPEAKE AND OHIO HOSPITAL, Huntington, W. Va.—Dr. Robert Vernon Larrick, Gore.

SAINT FRANCIS HOSPITAL, Pittsburgh, Pa.—Drs. Ralph Ephriam Berman, Beckley, W. Va.; and Albert Pantalone, Farmington, W. Va.

THE PHILADELPHIA GENERAL HOSPITAL, Philadelphia, Pa.—Dr. Thomas Garland Potterfield, Charleston, W. Va.

ALLEGHANY GENERAL HOSPITAL, Pittsburgh, Pa.—Dr. George Frederick Thiers, Holliday's Cove, W. Va.

UNITED STATES NAVAL HOSPITAL, Philadelphia, Pa.—Dr. John Cadwell Wingfield Campbell, New York, N. Y.

FRANKLIN SQUARE HOSPITAL, Baltimore, Md.—Dr. Mary Elisabeth Case, Lake City, Fla.

UNION MEMORIAL HOSPITAL, Baltimore, Md.—Dr. Albert Henry Dudley, Jr., Baltimore, Md.

WEST BALTIMORE GENERAL HOSPITAL, Baltimore, Md.—Dr. Harry Teter Linger, Clarksburg, W. Va.

UNIVERSITY HOSPITAL, Baltimore, Md.—Dr. Gerald Arthur Martin, Street Post Office, Md.

UNITED STATES NAVAL HOSPITAL, Bethesda, Md.—Dr. John Lewis Read, Camden, N. J.

UNITED STATES MARINE HOSPITAL, Baltimore, Md.—Drs. Wyson Curry, Jr., Montgomery, W. Va.; Eugene Elihu Hutton, Jr., Huttonsville, W. Va.; George Lawton Lemon, Lewisburg, W. Va.; and Stuart McGuire Sessoms, Roseboro, N. C.

SAINT MARY'S HOSPITAL, Rochester, N. Y.—Dr. John Robert Fitzgerald, Pittsburgh, Pa.

QUEENS GENERAL HOSPITAL, Jamaica, N. Y.—Drs. Ivan Graham Freed, Harrisonburg; and Daniel Ross, New York, N. Y.

PRESBYTERIAN HOSPITAL, New York, N. Y.—Dr. William Allen Fuller, South Boston.

UNITED STATES NAVAL HOSPITAL, St. Albans, N. Y. —Dr. Arthur Waldo Stoolfire, West Alexander, Pa.

UNITED STATES MARINE HOSPITAL, Staten Island, N. Y.—Drs. William Clayton Robertson, Richmond; and Jack Clarence Woodson Warnock, Huntington, W. Va.

CHARLOTTE MEMORIAL HOSPITAL, Charlotte, N. C. —Dr. Sam Booker Dillard, Draper, N. C.

REX HOSPITAL, Raleigh, N. C.—Dr. Van Wyke Gunter, Sanford, N. C.

THE CITY HOSPITAL, Winston-Salem, N. C.—Dr. James William Johnston, Elon College, N. C.

TOURO INFIRMARY, New Orleans, La.—Drs. Rowland Harvey Burns, Lebanon; Alvin Benzion Herbert Mirmelstein, Newport News; and Robert Patrick Moore, Hampden-Sydney.

SOUTHERN BAPTIST HOSPITAL, New Orleans, La.—Dr. Edward Kent Carter, Gate City.

UNITED STATES MARINE HOSPITAL, New Orleans, La.—Dr. William Edward Copenhaver, Crockett.

UNIVERSITY OF CALIFORNIA HOSPITAL, San Francisco, Calif.—Dr. Claude C. Coleman, Jr., Richmond.

UNITED STATES NAVAL HOSPITAL, Mare Island, Calif.—Dr. Malcolm Earle Hunter, Jr., Richmond.

THE QUEEN'S HOSPITAL, Honolulu, Hawaii—Dr. Scott Cree Brainard, Honolulu, Hawaii.

LAKEWOOD HOSPITAL, Lakewood, Ohio.—Dr. Charles Harry Brant, Lakewood, Ohio.

CINCINNATI GENERAL HOSPITAL, Cincinnati, Ohio —Dr. Jack James Schwartz, Newark, N. J.

CLEVELAND CLINIC, Cleveland, Ohio—Dr. Philip Gordon ReMine, Richmond.

BARNES HOSPITAL, St. Louis, Mo.—Dr. James Webster Brooks, Winchester.

HARPER HOSPITAL, Detroit, Mich.—Dr. Edward Franklin Counts, Jr., South Charleston, W. Va.

THE GRACE HOSPITAL, Detroit, Mich.—Dr. William Richard McCune, Gassaway, W. Va.

ARECIBO DISTRICT CHARITY HOSPITAL, Arecibo, P. R.—Dr. Rafael Cuevas-Zamora, Rio Piedras, P. R.

VANDERBILT UNIVERSITY HOSPITAL, Nashville, Tenn.—Dr. Austin Ingram Dodson, Jr., Richmond.

UNIVERSITY OF CHICAGO CLINICS, Chicago, Ill.—Dr. Rupert Stanley Hughes, Jr., Richmond.

GARFIELD PARK COMMUNITY HOSPITAL, Chicago, Ill.—Dr. Charles Edward Ward, Parkersburg, W. Va.

PRESBYTERIAN HOSPITAL, Chicago, Ill.—Dr. William Chisholm Winter, Jr., Richmond.

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JAMES M. JACKSON MEMORIAL HOSPITAL, Miami, Fla.—Dr. George Maynard Nipe, Dayton.

GALLINGER MUNICIPAL HOSPITAL, Washington, D. C.—Dr. Edward Howard Scherr, Petersburg.

MONTREAL GENERAL HOSPITAL, Montreal, Canada —Dr. Clayton Lay Thomas, Paducah, Ky.

UNITED STATES NAVAL HOSPITAL, Jacksonville, Fla.—Drs. Marvin Garten Burdette, Oak Hill, W. Va.; and Charles William Holcomb, Sutton, W. Va.

KING COUNTY HOSPITAL, Seattle, Wash.—Dr. Richard Dale Wilson, Port Orchard, Wash.

Personnel Changes, State Department of Health.

Dr. William Grossman, Director of the Bureau of Communicable Diseases, resigned this position as of April 1, to take a post-graduate course in medicine at the University of Virginia.

Dr. Harry H. Henderson, Assistant Epidemiologist, also resigned this position as of April 1, to take a post-graduate course in medicine at the Medical College of Virginia.

Dr. E. M. Holmes, Jr., resumed his position as Director of the Division of Venereal Diseases, as of March 15. He recently was released from the Army.

Veterans Loan Fund.

The Council of the Medical Society of Virginia, at its winter session, authorized the setting aside of a fund of $10,000 to be used in loans to returning veterans for the purpose of post-graduate education or establishing themselves in practice.

This is to be administered by a committee appointed by the Council and any veteran interested should communicate with the executive secretary of the Society, at 1200 East Clay Street, Richmond 19.

Second Refresher Course in General Medicine.

A two-week Refresher Course in General Medicine was given at the Medical College of Virginia, March 4-16, 1946. This was the second of four courses to be given alternately by the University of Virginia and the Medical College of Virginia every three months from December 1945 to September 1946.

Thirty-three lectures, eighteen clinics and thirty-six ward rounds were conducted by members of the faculty.

Guest speakers were Dr. Frederick J. Brady, Washington, Surgeon, United States Public Health Service; Dr. Harrison F. Flippin, Philadelphia, Consultant in Chemotherapy to National Research Council; Dr. Edward C. Hamblen, Durham, Associate Professor of Obstetrics and Gynecology, Duke University; Dr. Chester M. Jones, Boston, Clinical Professor of Medicine, Harvard Medical School; Dr. Edwin P. Lehman, Charlottesville, Professor of Surgery and Gynecology, University of Virginia; Dr. Henry B. Mulholland, Charlottesville, Professor of Practice of Medicine, University of Virginia; Dr. Elmer L. Sevringhaus, Madison, Professor of Medicine, University of Wisconsin; Dr. Austin Smith, Chicago, Secretary Council of Pharmacy and Chemistry, American Medical Association.

Forty physicians enrolled in and attended the course. Of these, two were civilian physicians, two were still in the Services, and thirty-six were Veterans.

The third course of this series will be given at the University of Virginia Medical School in Charlottesville in June, and the last at the Medical College of Virginia, Richmond, in September 1946. More detailed information may be obtained from Dr. Staige D. Blackford, Box 1725, University Post Office, Charlottesville, or Dr. James P. Baker, Box 94, Medical College of Virginia, Richmond.

The Virginia Society of Ophthalmology and Oto-Laryngology

Will hold its annual meeting at Hotel Roanoke, Roanoke, on May the 4th, under the presidency of Dr. Meade Edmunds of Petersburg. Guest speakers for the meeting will be Dr. Arthur T. Ward, Johns Hopkins Hospital, and Dr. A. E. Maumenee, Wilmer Institute of Johns Hopkins Medical School. Further information with regard to the meeting may be obtained from Dr. Francis H. McGovern, secretary, of Danville.

Promotions in the Service.

Dr. Robert W. McCullough, Charlottesville, has been promoted to the rank of Lieutenant Colonel.

Dr. Edward G. Face, Richmond, has been promoted to a captaincy in the Medical Corps of the Army.

Back in Civilian Practice.

In addition to those previously announced in the MONTHLY, we have been advised that the following members of the Medical Society of Virginia have been released from Service and resumed practice:

Dr. E. L. Alexander, Newport News.
Dr. John E. Alexander, Vienna.
Dr. E. S. Berlin, Wytheville (now Norfolk).
Dr. Charles H. Bondurant, Riverton.
Dr. Leland C. Brown, Staunton.
Dr. R. D. Butterworth, Richmond.
Dr. Beverley B. Clary, Richmond.
Dr. Robert F. Cline, Winchester.
Dr. Joseph E. Cox, Waynesboro.
Dr. Henry C. Davis, Bluefield, W. Va.
Dr. Edward A. Delarue, Richmond.
Dr. Joseph M. Dixon, Roanoke.
Dr. E. C. Drash, Charlottesville.
Dr. F. L. Finch, Richmond.
Dr. G. S. Fitz-Hugh, Charlottesville.
Dr. J. B. Funkhouser, Marion (now V.A. Adm., Richmond).
Dr. Charles F. Gaylord, Staunton.
Dr. Thomas A. Gibson, Winchester.
Dr. E. S. Groseclose, Lynchburg.
Dr. Gordon D. Hall, Dumbarton.
Dr. G. G. Himmelwright, Newport News.
Dr. E. M. Holmes, Richmond.
Dr. H. B. Holsinger, Farmville.
Dr. Thomas J. Humphries, Roanoke.
Dr. Frederick M. Jacobs, Roanoke.
Dr. William A. Johns, Richmond.
Dr. Herbert C. Jones, Petersburg.
Dr. John H. Judson, Arlington.
Dr. Bernard Katzen, Roanoke.
Dr. Prentice Kinser, Danville.
Dr. Edmund LaPrade, Richmond.

Dr. Byrd S. Leavell, Charlottesville.
Dr. Claude M. Lee, Jr., Charlottesville.
Dr. Henry Lee, Roanoke.
Dr. William Lueders, Jr., Staunton.
Dr. Lewis C. Lush, Richmond.
Dr. J. R. McGriff, Arlington.
Dr. J. E. Marable, Newport News.
Dr. C. B. Martin, Nokesville.
Dr. James A. Miller, Winchester.
Dr. Thos. W. Murrell, Jr., Richmond.
Dr. Charles T. Nicholson, Alexandria.
Dr. C. A. Nunnally, Fredericksburg.
Dr. Forrest E. Oglesby, Oceana (now Emporia).
Dr. Wilmer H. Paine, Charlottesville.
Dr. Charles H. Patterson, Lynchburg.
Dr. Williams E. Pembleton, Richmond.
Dr. W. L. Peple, Jr., Richmond.
Dr. Wellford C. Reed, Richmond.
Dr. William L. Schafer, Alexandria.
Dr. William P. Terry, Blackstone.
Dr. James L. Thomson, Norfolk.
Dr. Clary C. Trice, Richmond.
Dr. E. T. Trice, Richmond.
Dr. Leo M. Solet, Arlington.
Dr. W. E. Vermilya, Clifton Forge.
Dr. A. D. Ferguson White, Lynchburg.
Dr. Mortimer H. Williams, Roanoke.
Dr. Frank B. Wolfe, Coeburn.
Dr. Harry B. Yeatts, Danville.

Dr. J. B. Funkhouser,

Who was connected with the staff of the Southwestern Virginia State Hospital in Marion, at the time of entering service with the 45th General Hospital, has been released from service and is now with the Veterans Administration at McGuire General Hospital, Richmond. He is acting chief of the department of neuro-psychiatry at this hospital.

Dr. G. G. Himmelwright,

Class of '37, Medical College of Virginia, who entered the medical corps of the U. S. Army just after completing four years of hospital internship and residencies, has recently been separated from the service and has located for practice in Newport News, with offices in the Medical Arts Building.

To Enter Army.

Dr. A. William Thompson and Dr. Herbert D. Gullick, both of whom graduated in medicine from the University of Virginia in 1945, expect to enter the medical corps of the Army of the United States in April. Dr. Thompson has been interning at St. Louis City Hospital, and Dr. Gullick at Albany (N. Y.) Medical School Hospital.

Alumni Association, Medical College of Virginia.

At the meeting of the Alumni Association on March 22, Dr. Roshier W. Miller was elected trustee-emeritus of that organization. Dr. Waverly R. Payne of Newport News was re-elected president, and Dr. Harry Lee Claud of Washington, D. C. was named president-elect. Dr. W. Henry Street of Richmond was re-elected secretary, and Dr. Harvey B. Haag, also of Richmond, was named treasurer.

Dr. Angus K. Wilson,

Formerly of Norfolk, is now located in Salt Lake City, Utah, where he is associated with Dr. James P. Kerby in the practice of radiology—diagnosis and therapy.

Dr. Ernest Serrano,

Formerly of Waynesboro, who is on terminal leave from service in the Navy, has located in Hollywood, Florida, where he is resuming private practice, with offices in the Professional Building.

American College of Chest Physicians.

The next oral and written examinations for Fellowship in the College will be held at San Francisco on June 29, 1946. Applicants for Fellowship in the College who plan on taking the examination should communicate with the Executive Secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

The 12th annual meeting of the College is scheduled to be held at the Sir Francis Drake Hotel, San Francisco, June 29-30, July 1-2.

Dr. G. Foard McGinnes,

Medical Director of the American Red Cross, has been named vice-chairman in charge of the newly-established Office for Health Services. This new office groups together all Red Cross services relating to health and medical activities: the office of the medical director, the nursing, nutrition and disaster medical services, and first aid, water safety and accident prevention. In addition to being responsible for Red Cross health and medical activities, Dr. McGinnes will maintain liason with the Offices of the Surgeon General of the Army, Navy, and Public Health Service, and with other medical and health agencies.

Dr. McGinnes went to Washington in October, 1943, as national medical director of the Red Cross.

He is a native of Virginia and a graduate in medicine from the University of Virginia. He was connected with the work of the Virginia State Department of Health for several years.

The American College of Surgeons

Will hold its thirty-second Clinical Congress at the Waldorf-Astoria, New York, September 9 to 13, inclusive. Plans include the usual extensive program of demonstrations, scientific sessions, panel discussions, symposia, forums, Hospital Standardization Conference, medical motion pictures, business meetings, and educational and technical exhibits, which will be held in the headquarters hotel, and operative and non-operative clinics in the local hospitals.

This will be the first Clinical Congress since the meeting in Boston in 1941. Since that time, 2,744 surgeons have been received into fellowship in absentia, and the formal initiation ceremonies on the opening night, always impressive, will be exceptionally so this year because of the large number of new Fellows admitted during the past four years who are expected to be present.

Dr. W. Edward Gallie of Toronto, President, and other officers, Regents, and Governors have remained in office since 1941 because of the cancellation of annual meetings of the Fellows. Especial interest will also therefore be attached to the installation of the officers-elect, headed by Dr. Irvin Abell, Chairman of the Board of Regents, as President.

Dr. Howard A. Patterson and Dr. Frank Glenn of New York City are Chairman and Secretary respectively of the Committee on Local Arrangements. Dr. Henry Cave of New York, a member of the Board of Regents of the College, is also active in directing the local plans for the meeting, attendance at which is usually around five thousand surgeons and hospital representatives.

Dr. W. H. Bruce,

Formerly of Pennington Gap, announces his removal to Dungannon.

Dr. Leo Solet,

Recently released from Service, resumed practice in Arlington, the first of this month, with offices in Arlington Medical Center.

Dr. William J. Hagood, Jr.,

Recently discharged from the Army of the United States with the rank of Captain, is now located in Clover, and associated with his father, Dr. J. D. Hagood, in the practice of medicine. Captain Hagood is a member of the class of '43, Medical College of Virginia.

Dr. Paul W. Bowden,

Formerly connected with health work in Virginia, but more recently of Oakland, California, has returned to Virginia and is now engaged in private practice in Arlington.

Dr. E. W. Dodd,

Buchanan, has retired from practice after a number of years of active work in that section. Dr. G. M. Wright of Bridgewater has taken over Dr. Dodd's practice.

Dr. J. E. Amiss,

Who was separated from the Service last Fall, has located at Altavista, where he is on the staff of the Piedmont General Hospital.

Need for Medical Books in Manila.

One of the projects of the Academy-International of Medicine and Dentistry is to attempt to supply the destroyed medical library at the University of Manila with sufficient books to enable the school to operate. The Japanese destroyed the university and its library until almost no usable equipment remained. The Academy-International is, therefore, appealing to the medical profession to donate books that may be sent to Manila.

Our readers may give books, periodicals or cash. Those willing to contribute books should first write to Academy-International of Medicine, Liberty Building, Topeka, Kansas, giving the names, authors and edition numbers of the books that are available. In an effort to send only material that is critically needed and to avoid duplication, all gifts should be cleared before they are sent. The donor will then be instructed which of these books are desired. If cash is given, it will be used for needed textbooks and arrangements have been made with leading publishers to sell books for this purpose at cost. Checks should be made payable to Manila Library Fund, A-.I.M.

Dr. Joseph E. Cox Honored.

Dr. Joseph E. Cox of Waynesboro, former Colonel in the Medical Corps with the 114th Station Hospital, was on March the 11th presented with the Legion of Merit medal "for exceptionally meritori-

ous conduct in the performance of outstanding services in North Africa and Italy from 1 December 1943 to 8 May 1945". The ceremonies were held at Fishburne Military Academy, Waynesboro, where Dr. Cox was former instructor in sciences and later commandant of cadets before entering the University of Virginia, Department of Medicine, from which he graduated in 1934.

Dr. Homer E. Ferguson

Recently returned to Richmond, after taking special work in gynecology and endocrinology at New York Post-Graduate Medical School and Lahey Clinic in Boston. He has offices at 7 North Monroe Street where he limits his work to these specialities.

Annual Spring Clinic.

The Norfolk County Medical Society will hold its Annual Spring Clinic, its first after cessation of war, the latter part of May (date to be announced in next issue of the MONTHLY). There will be a program in the morning, followed by luncheon at the Norfolk General Hospital, and the afternoon session will be at the new DePaul Hospital, followed by dinner.

All physicians in Eastern Virginia and North Carolina are invited.

Married.

Dr. Allan B. Warren and Miss Wyclif Scott, both of Orange, March 2nd. Dr. Warren is a graduate of the University of Virginia, class of 1941. They will make their home in Charlottesville.

Lt. (jg) William Joseph Frohbose, MC., USNR., Plainfield, N. J., and Miss Elizabeth Montgomery Blair, Richmond, March 16th. He is a graduate of the Medical College of Virginia, class of March 1943. They will make their home in Williamsburg.

Lt. (jg) Robert Steele Hutcheson, MC., USNR., Lexington, and Miss Mary Louise Moffett. Charlottesville, March 1st. He received his medical degree from the University of Virginia, class of December 1943.

Dr. Peter A. Wallenborn, Jr., Charlottesville, and Miss Dolly Virginia Franklin, Concord, March 2nd. He is a graduate in medicine of the University of Virginia in 1944.

Physician Wanted—

Apply Mrs. A. M. Burfoot, Fentress, Virginia, for office space and equipment. Location about fifteen miles from Norfolk. Physician will replace three deceased physicians in community. (*Adv.*)

Dr. Henry M. Snead,

Petersburg, has been appointed City Coroner succeeding Dr. W. L. Barnes, resigned.

For Sale—

B & L Colorimeter; GE TRUVISION Stereoscope. Both in good condition. Address P. O. Box 1172, Radford, Va. (*Adv.*)

Wanted—

Laboratory technician, registered, preferably one familiar with x-ray, for a 50-bed hospital in northern Virginia. Salary or salary and maintenance. Apply, "Laboratory Technician", care the MONTHLY. (*Adv.*)

Established Hospital for Lease.

A Sanatorium for nervous, mental, alcoholic and drug cases, doing an excellent business, to a reputable physician or medical group. Dr. E. W. Stokes, 923 Cherokee Road, Louisville 4, Kentucky. (*Adv.*)

Location for Physician.

I have been practicing medicine in Franklin, Virginia, for 34 years and at no time during that period has there been a greater need for medical service than now. A wonderful opportunity for a capable young man to build up a good practice and to do a good service to the community. Anyone interested may write to the City Manager, Mayor of Franklin, President of Camp Mfg. Co., Inc., the President of the Junior Chamber of Commerce, or to Dr. J. C. Rawls, Franklin, Va. (*Adv.*)

Pathologist, Board Diplomate,

Competent and experienced in pathologic anatomy, frozen section diagnosis, clinical pathology and tropical diseases; Laboratory director and research associate in distinguished organization; Professor, consultant and executive; numerous publications, excellent references. Age 40. Address "Pathologist", care this journal, 1200 East Clay Street, Richmond. (*Adv.*)

Geriatrics

Made its initial appearance in March and gives promise of a great future as it should fill a need of general practitioners and specialists alike. It will be issued bi-monthly from 84 South Tenth Street, Minneapolis 2, Minnesota, under the editorship of Dr. A. E. Hedback with the assistance of a board of well known physicians. It will sell for three dollars a year.

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Obituaries

Dr. John James Board,

One of the older members of the Medical Society of Virginia, died at the home of his son in Rustburg, December the 30th, 1945. He was born in Bedford County in June 1859. After teaching for several years, he took up the study of medicine at Jefferson Medical College, Philadelphia, from which he graduated in 1880. With the exception of a few years in Big Stone Gap, he practiced in Campbell County until his retirement from practice several years ago. He is survived by his wife and three children.

Capt. Max Leonard Holland, M.C.,

Roanoke, died in Fort Benning, Ga., November the 9th, 1945, death being due to bronchopneumonia. He was thirty-seven years of age and a graduate of the Medical College of Virginia in 1935. He interned at the Baroness Erlanger Hospital in Chattanooga, Tenn., and the Toledo (Ohio) Hospital, after which he served a residency at Gill Memorial Hospital in Roanoke. He entered service in the Army of the United States in July 1942.

Dr. William Isaac Robey,

Of Herndon, died in Washington, D. C., October 5, at the age of 67. He was a graduate from the George Washington University School of Medicine in Washington in 1902 and had been a member of the Medical Society of Virginia for a number of years.

Dr. Robert Pinckney Fagge,

Perhaps the oldest practicing physician in Virginia, died unexpectedly at his home in Axton on March 19th. He was ninety years of age and was "still at work" when he died. For the past several weeks Dr. Fagge had not been able to call on his patients but during that time many had been brought to his office. He had practiced for over fifty-six years in Henry County during which time he was also a community leader, an early advocate of good roads, and a sound public education program for rural children. Dr. Fagge was a member of the Medical Society of Virginia. His wife, two daughters and a son survive him.

Dr. Robert McCheyne Glass,

Prominent Winchester physician, died March 18th from a heart attack while attending a meeting. He was sixty-seven years of age and graduated in medicine from the University of Maryland in 1901. Dr. Glass was formerly a member of the Medical Society of Virginia. His wife and two children survive him.

Dr. Thomas McMurray Armistead, Jr.,

Lynchburg, died following injuries received when he slipped while walking in a corridor of the State Colony Hospital on March 1st. He was thirty years of age and received his medical degree from the University of Virginia in 1940. Dr. Armistead joined the Colony staff in 1943. His mother survives him.

Resolutions on Dr. DeJarnette.

Dr. Henry Magruder DeJarnette died in Fredericksburg, Virginia, on February 15, 1946, from coronary thrombosis, at the age of seventy-two years. He had been in poor health for sometime but he continued at work until the day of his death.

Dr. DeJarnette graduated at the University College of Medicine, Richmond, Virginia, in 1897. After a few years of general practice, he studied in New York and took up the specialty of eye, ear, nose, and throat in Fredericksburg, where he practiced for forty years.

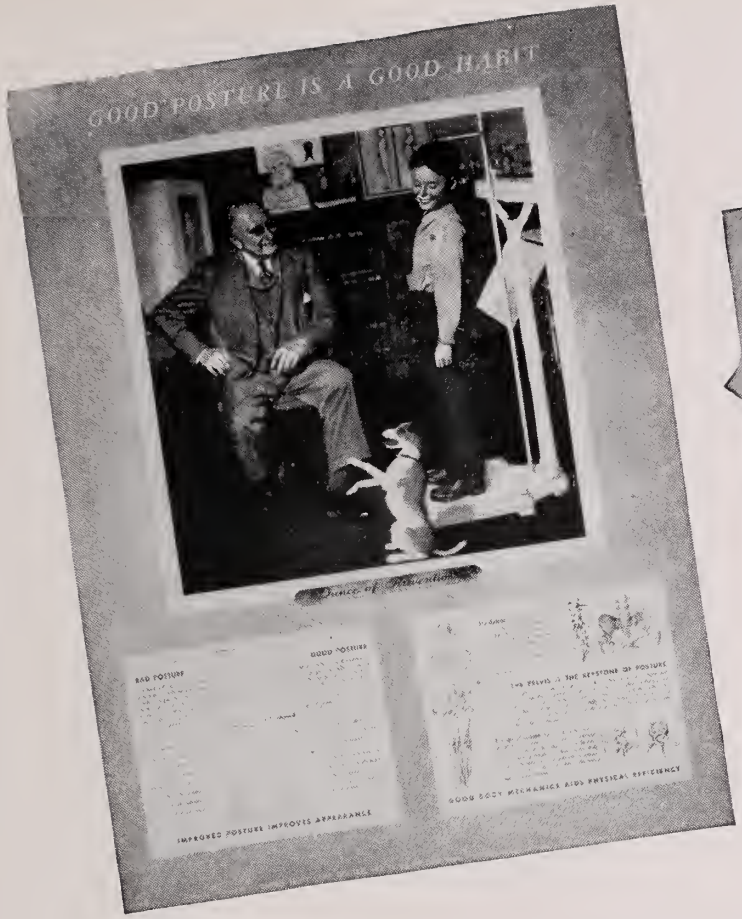
He was a member of the Mary Washington Hospital Staff, the Fredericksburg Medical Society, and the Medical Society of Virginia.

The Fredericksburg Medical Society at its meeting on March 11, 1945, adopted the following resolution:

BE IT RESOLVED that in the death of Dr. DeJarnette this Society and community have lost a most skillful and successful doctor and friend, who administered to all who sought his aid, regardless of color or ability to pay.

IT IS FURTHER RESOLVED that a copy of these resolutions be published in the local paper and in the VIRGINIA MEDICAL MONTHLY, and that a copy be sent to his family, and also spread on the minutes of this Society.

N. TALLEY BALLOU, JR.,
G. BLIGHT HARRISON,
T. W. DEW, *Chairman.*



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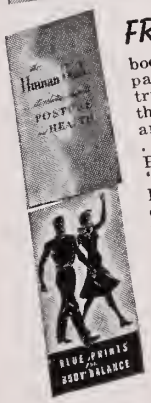
We hope to merit the continued cooperation of the medical profession during the first post-war observance of National Posture Week as peace presents its varied problems to those charged with maintaining the health of the nation.



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Guest Editorial

What the Farmer Expects from Medicine

THE 57 million people who live on farms and in small towns have been conservative and slow about raising their voices in regard to their health needs. They have long been confident that the rural way of life is the healthiest and best, but they have seen their young people leave the farms and small communities and go to the cities, and they have learned that when these young people reach the cities their health will be protected by sanitary measures and modern medical services. They have learned from association with their city relatives and friends of experiences whereby cities have been able to check and control disease and bring about improvement in medical care, such as the purifying of water, pasteurization of milk, providing sanitary conditions in their homes and establishing good hospitals and clinics where everyone may secure the best of medical care. Rural people have not been slow to recognize these factors that affect health.

Through the years farmers have recognized:

1. That tuberculosis in their livestock was a dread economic scourge, but when they learned of the relationship between tuberculosis in livestock and human beings they then took the necessary steps through cooperative effort with the medical and veterinary professions, with the result that tuberculosis in livestock has been virtually eliminated. Today they observe the results of this program by the reduced number of cases and types of tuberculosis in human beings in their respective communities.

2. In more recent years dairymen realize the great economic loss to them as the result of contagious abortion in their herds, but they recognize the close relationship between contagious abortion in animals and undulant fever in humans. They have been pursuing an active, aggressive campaign for the eradication of contagious abortion in their herds with the result that where this disease has been eliminated in dairy herds there has been a decline in the cases of undulant fever in humans.

3. It was not, however, until reports of army rejection came out that rural people began to seriously doubt their health advantages when the figures revealed that farmers had the highest rate of rejection of any group. The results of selective service of medical examinations of rural youth has caused rural people to have a greater interest than ever in the problems of improved conditions for better health rurally.

4. The development and extension of prepaid hospital plans, and, in some instances, prepaid medical care plans, has done much to bring home a remedy for some of the problems. In prepaid care plans organized on the cooperative basis they have found that by averaging out the hospital and medical costs over a long period and over

a large group the cost when applied by this method, rather than when sickness strikes, is not so heavy or unbearable.

Membership in farm organizations is demanding action through their leadership in an organized way. The larger farm groups, such as the Farm Foundation and the American Farm Bureau Federation, have for some time had committees at work studying and analyzing the health problem. Only by exact information arrived at in this manner can a definite policy be arrived at as to the rural health problem. These committees have been meeting with every group dealing with the rural health situation.

At a joint meeting of the Medical Care Committee of the American Farm Bureau Federation, with a representative committee of the American Medical Association, it was informally agreed during the discussion on July 12, 1945:

1. That the American Medical Association endeavor to have State medical associations cultivate better working relationships with the State Farm Bureaus.
2. That all committees, national, state or community, selected or appointed concerning state health activities, have qualified farmer representatives included.
3. Work with medical profession in combating socialized medicine by promoting an aggressive, constructive program.
4. Determine the need of factual basis after thorough consideration and research of the need for hospital and medical services with particular reference to rural areas.
5. That the American Farm Bureau Federation and the state federations be leaders in working out plans for wise, effective use of public funds for improvement of public health in rural areas with emphasis on local participation and local control.
6. That some plan be worked out for providing scholarship or loan funds for worthy rural youth to make it possible for them to study medicine with or without agreement to return to the country for practice. Interstate collaboration in medical education of students from states in which there is no medical school.
7. One of the problems in medical care for rural people is payment. We urge the development of prepayment medical and hospital care on a sound actuarial basis without subsidy.

The Associated Women of the American Farm Bureau, representing a million homes, have adopted the following policy:

"One of rural America's most urgent problems is to provide a program to bring about better facilities in rural areas for hospitals, medical care and improved health. It will take the combined efforts of the medical profession and rural people to solve the problem.

"The solution must provide for comprehensive health education, for well trained doctors, dentists, nurses, technicians and laboratory scientists, as well as the establishment of Public Health Centers, hospitals and clinics accessible to all sections of rural America.

"The care of our former service men and women, of the mentally sick and the indigent and the control of communicable disease is a public obligation and should be supported from public taxation. In some communities, after careful surveys it

may be found advisable to use Federal grants-in-aid to assist groups to erect and equip hospitals. These must be controlled by the local people themselves.

"We believe in the extension of voluntary group prepayment services on some type of an insurance plan that provides greater flexibility and would be more likely to succeed over a wide area than rigid uniform plans on a compulsory basis. We believe that a plan which will provide for prevention as well as curative measures and the right of the free choice of doctors should be zealously guarded."

Some of the problems in connection with the development of a better health program for rural people are:

(1) Shortage of doctors in rural areas where medical care is most needed. The problem now is how to alleviate this situation.

(2) Greater need for hospital and medical facilities in rural areas to attract well-trained medical men, thereby providing better medical services.

(3) The need of a development of the philosophy of the possibilities to professional medical men in rural practice.

(4) A greater development in prepaid hospital care plans, thereby providing the incentive for medical care.

(5) The development of prepaid medical care plans as a means of averaging the cost and placing medical care on an annual service and cost basis.

J. S. JONES.

EDITOR'S NOTE: Mr. Jones of St. Paul is Executive Secretary Minnesota Farm Bureau Federation and member of the National Committee of Rural Health. He is also on important committees of the Farm Foundation, and a Regent of the University of Minnesota.

Floral Eponym (38)

GREWIA

NEHEMIAH GREW, 1641-1712.

Grew was born in Warwickshire England in 1641, and graduated at Cambridge in 1661. He took his M.D. at Leyden in 1671. He then settled in London as a practitioner, where he became secretary of the Royal Society. In 1682 he published his famous *Anatomy of Plants.* Haller styled him "an industrious observer on nature in every direction", who was probably the first to consider the existence of sex in plants.

Grewia is a large genus of tiliaceous shrubs and trees found chiefly in the tropics of the old world. Two or three are slightly cultivated in Southern Florida. The fibrous bark of some species is used for making nets, while the wood of others, as G. *elastica,* is valuable. The fruit is used in India for flavoring drinks or sherbets.

A NEW AND SIMPLE PROCEDURE FOR DEVELOPING ESOPHAGEAL VOICE IN THE LARYNGECTOMIZED PATIENT*

E. TRIBLE GATEWOOD, M.D.,
Richmond, Virginia.

The incidence of laryngeal cancer is much greater than mortality statistics indicate. It is estimated that four per cent of all malignant tumors of the body occur in the larynx, and that only one and one-half per cent of cancer deaths are due to lesions of this organ.

As total extirpation of the larynx is performed more and more often, it becomes necessary that the laryngologist interest himself more and more in the problem of esophageal speech. In the past decade the literature pertaining to laryngeal malignancy has been very extensive. However, with few exceptions little consideration has been given to the development of voice in the patient without a larynx. The immediate training and production of a pseudo-voice of a laryngectomized person is now recognized as an integral part of the management of this disease, and the patient may not be completely dismissed until every possible opportunity has been given to acquire a new speech.

It is often stated that cancer of the larynx is on the increase, and that approximately eighty per cent of such lesions originate on the vocal cords, and in most instances give adequate warning.[1] If this statement is true, a much larger number of early cases should be seen by the laryngologist than is being seen today. According to some authors laryngectomy is performed three times as often as laryngo-fissure operation. It is generally conceded, however, that only twenty per cent of persons with laryngeal malignancy when examined are suitable for laryngo-fissure operation, while forty per cent require total extirpation, and that the rest may be regarded as inoperable. The layman can easily diagnose hoarseness and the laryngologist can just as easily analyze the cause of the symptom, yet malignant cord lesions are too infrequently seen until the danger signal has lost most of its virtue.

The question may be asked, is not life expectancy short after laryngectomy? The answer is quite relative. Age and body condition apart from the cancer are important factors. The immediate operative mortality is low, though, conversely, the recurrence incidence is estimated at fifty per cent. This, of course, varies with the individual operator's criteria used in selecting patients for operation. When the lesion requires total extirpation of the larynx and the patient is so informed, he not only thinks of the operative risk and the uncertainty of being permanently cured, but also of the total loss of his voice. While this phase of the situation is secondary, it is a most important consideration to the patient. Until it is explained in detail that a new way of talking can be developed, he is profoundly affected.

Fig. 1. Illustrates iodized cotton plug placed in esophagus attached to string, to block gastric air and to localize esophageal air chamber by gliding movements.

The laryngologist, of course, gives more thought to the diagnosis and extirpation of cancer than he does to restoring the function that the organ performed. It has only been in recent years that a few American laryngologists have made a concerted effort to restore to these patients a voice which may be his own. In many instances the physician may feel that his responsibility is ended when he dis-

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*Presented before the Southern Section of the American Laryngological, Rhinological and Otological Society, Charlotte, N. C., January 15, 1945.

charges the patient from the hospital and request that he use an artificial voice box. A large number will do this, and make the best of it, while others will be too sensitive or discouraged to avail themselves of its use.

The artificial larynx is serving a good purpose in many instances. However, when it is considered in conjunction with esophageal speech the disadvantages are too numerous to elaborate upon in this paper. Jackson received 30 replies to questionnaires sent laryngectomized patients, and to these only 18 replied "yes" to the question, "Have you learned to speak without your larynx?"[2] Wright stated in a splendid paper published in 1942 summarizing ten laryngectomies, "One patient has developed an excellent stomachic voice, and the others have an audible and understandable whispered voice. All have learned to use the artificial larynx."[3]

Curing the patient is, of course, first consideration in dealing with cancer. However, voice development is of considerable concern to the patient if he attempts to regain his former economic and social station in life. When the patient leaves the hospital he is usually cheerful and grateful, but I am sure in a deeper sense he is profoundly impressed with the fact that he is isolated from normal social life and unsuitable for employment. The first problem is to rehabilitate the patient psychologically, and, second, physically.

There are on record certain ingenious patients who have produced good vicarious voices, either by chance or self instruction. Conversely, there are others who have extreme difficulty in grasping the idea of vocal gymnastics, and are unable to execute the mechanism in an effective manner. There are several factors which influence the development of esophageal voice: (1) The will of the patient to learn is especially essential, and (2) the encouragement and confidence that may be imparted to the patient by one who has had a like operation, and has acquired a satisfactory voice. The psychology of voice production is an interesting study and perhaps it is based upon conjecture and results in an unknown quantity. Our present knowledge of nerve control of involuntary action is also necessarily limited.

Fig. 2. Size of catheters used.

Fig. 3. Shows usual depth of catheter inserted in esophagus to aid the beginner.

It is not entirely clear what influence operative technic has upon a substitute voice. Gutzmann thinks the voice is largely dependent upon the individual anatomic construction of the upper esophagus and hypopharynx.[3] Stern says, "The glottis location probably depends upon the conditions created in the

operation, and is of great importance to the success of speech."[7] Total extirpation of the epiglottis has shown no derogatory effect upon voice development, nor has the voice shown any superior quality in those patients whose epiglottis was not removed. The technic we have followed has omitted the removal of the hyoid bone. Some operators remove this bone routinely, and I have heard of no adverse effect upon voice development. It does seem that partial resection of the anterior ribbon muscles impairs the antagonistic action of the sphincter fibers of the esophageal orifice. We have had one patient on whom we did a laryngo-fissure operation and later a laryngectomy. The anterior ribbon muscles were partially removed because of recurrence and leakage through the cartilage. This patient had much more difficulty in developing a voice than did the average patient, in spite of his enthusiasm and determination. Another patient who had a post-cricoid lesion and required partial resection of the upper esophagus in addition to the laryngectomy, resulted in a very restricted esophageal lumen. She is acquiring esophageal voice and it will be interesting to note the end result of her speech.

The physical requirements for a substitute voice are an air chamber and a glottis capable of vibrating. It is possible that different patients may develop a new glottis in different areas. However, an esophageal orifice should lend itself well to the necessary contracting mechanism of which adjacent structures may be less capable. It occurred to me that if air could be piped below the "would-be glottis" it might aid the patient in forming an air column with sufficient pressure to induce glottic vibrations. Then muscular coordination could be induced by vocal gymnastics. In order to do this a small semi-flexible catheter not larger than a number six is inserted through the nose into the esophagus with its distal end resting in the upper third of the esophagus. The catheter is then anchored to the tip of the nose for placement. By attaching a bulb to the proximal end, air is furnished the esophagus by gentle pressure. My first trial of this method was on a patient who had considerable difficulty in aspirating air or belching. By persistent effort the patient was induced to relax upon prolonged expiration and at the same time compress the bulb rapidly and gently. By repeating this procedure many times sound was eventually attained. I felt encouraged, and so did the patient. He immediately indicated that it helped him to develop the sound. I was then concerned about the possible effect the caliber of the tube would have upon the esophageal vibrators in a finer sense of tone development, so I then summoned a former laryngectomized patient to my office who had achieved an excellent esophageal voice and I tried the experiment upon him. With the catheter inserted in the esophagus, I learned that there was no change in his tone or articulation. Larger catheters

Fig. 4. Shows method of piping air into the esophagus.

were experimented with later, but they soon proved to be obstructive. In some beginners I have used a number four catheter with satisfactory results, though I have found that a size six is more effective and it is very well tolerated.

The esophageal glottic folds are assumed to be very flaccid in contrast to vocal cords, and the insertion of a fine catheter does not seem to interfere with their approximation or vibrations. This procedure seems particularly helpful to the beginner until he can at least partially acquire an air chamber or is able to exercise better glottic control. While the tube has a very distinct practical value it also has a definite psychologic effect. The patient is

immediately encouraged when he experiences the sensation that he is definitely aided in making a sound when air is supplied the tissues that are capable of vibrating. This inflow of air is equivalent to esophageal inspiration and its action may be likened to a synthetic lung.

Expiratory pressure serves to help accelerate the column of air during the practice of phonation contractions. By repeated vocal efforts, vibratory quality and tension of the soft tissue folds are gradually acquired. During the early process of learning and before voluntary control is demonstrated, the use of the tube serves its greatest usefulness by supplying air free of effort to the inexperienced glottis, which lacks the help of an organized air chamber. In other words, the use of the tube acts as an artificial air chamber and aids the patient in practice, while acquiring muscular control. Once this is accomplished, the formation of an air chamber below the vibrators should follow. Unpleasant sensations may develop and action may be impeded if too vigorous use is made of the air. During the earliest phase of voice production, the act of supplying the esophagus with air by the patient alone seems to be the most difficult part of acquiring a new speech mechanism. Seemann states, "Once the patient masters the mechanism of voluntary aspiration of air the rest of the speech process is easy."[4] Stetson also says, "Using the constriction of the esophagus is a novel experience, but it does not clash with previous habits of the patient as does this intake process."[5] Roentgen studies made on certain patients of ours, who had acquired a fair degree of esophageal speech, corroborated the observations previously reported by Gutzmann,[6] Morrison,[8] and others, that the constricted esophageal area is the logical tone producing site. The average laryngectomized patient can master a whispered voice without practice or effort. It should be discouraged from the outset, as it makes for faulty habits in developing an understandable speech.

Eructation may be encouraged at the outset and it serves a good purpose in getting the patient started. However, some patients continue the so-called "gastric voice" which is produced by gulping air into the stomach and expelling it with a "clang of a churn." In this instance the act is accompanied by considerable effort and noise. McCall points out that preoperative training in belching is much desired and it will enhance the patient's ability to develop a better voice.[9]

The most perfect pseudovoice is usually exhibited by those who develop the very frequent nerve cell habit of inspirating small quantities of air in the esophagus between their words or sentences with no obvious effort. They often attain a fine degree of modulation and frequently a range of one to one and a half octaves. Patients who can accomplish such a voice may return to their former station in life with a certain degree of satisfaction.

REFERENCES

1. Gatewood, E. Trible: Diagnosis and Selection of Treatment for Carcinoma of the Larynx. *Virginia Medical Monthly* **68**:330-335 (June), 1941.
2. Jackson, C. L.: The Voice After Direct Laryngoscopic Operations—Laryngofissure and Laryngectomy. *Archives of Otolaryngology* **31**:33-36 (January), 1940.
3. Wright, Edward S.: Diagnosis and Treatment of Cancer of the Larynx. *Annals of Otology, Rhinology and Laryngology* **51**:228 (March), 1942.
4. Seemann, Mil.: Phoniatrische Bemerkungen Zur Laryngektomie. *Arch. Klin. Chir.* **140**:285-298, 1926.
5. Stetson, R. H.: Esophageal Speech for Any Laryngectomized Patient. *Arch. Otolaryng.* **26**:132-142 (August), 1937.
6. Gutzmann, Hermann: Ueber die Aesophagusstimme bei Laryngektomierten. *Deutsche Med. Wchnschr.* **51**:520-5, 1925.
7. Stern, Hugo: Grundprinzipien der Sprach und Stimmausbildung bei Laryngektomierten nebst einem neuen Beitrag zum Mechanismus der Sprache und Stimme derartig Operierter. *Wien. Klin. Wchnschr.* **33**: 540-541, 1920.
8. Morrison, Wallace: Physical Rehabilitation of the Laryngectomized Patient. *Archives of Otolaryngology* **34**:1101-1112 (December), 1941.
9. McCall, Julius W.: Preoperative Training for Development of the Esophageal Voice in Laryngectomized Patients. *Annals of Otology, Rhinology and Laryngology* **52**:364-376 (June), 1943.

Professional Building.

TRAUMATIC LOOSE BODIES FROM THE PATELLA*

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During the past year the author has encountered five cases of loose bodies in the knee joint, whose origin was from the articular surface of the patella and are probably chip fractures. In every instance in this small series an injury has been the causative factor, and none of these patients had any complaint relative to their knee until the admitting injury. The knee joint was "locked" in every patient on admission to the hospital. Roentgenograms failed to show a defect in the patella and the loose body of fractured fragment was so hidden that it was detected pre-operatively in but one patient. Even following removal of the loose body and re-examination of the roentgenograms it was difficult to find an area of increased density representing the fragment in the joint. Case reports of these five patients follow:

CASE REPORTS

Case 1.—Pfc. G. T., white, aged 21 years, was admitted to the hospital 6 April 1944. Patient stepped in a hole, twisting his left knee, while playing football 29 March 1944, on the beach at Anzio, Italy. He fell to the ground and was unable to straighten his left knee. This knee was moderately swollen, tender over the medial aspect of the joint and the knee was "locked" in 15 degrees of flexion. An exploratory arthrotomy of his left knee was done 7 April 1944 and revealed in the joint cavity a loose body that was irregular in shape and consisted of bone and cartilage. The medial meniscus was loose. No other pathology noted. The loose body and medial meniscus were excised. Convalescence was uneventful and he returned to limited service 2 June 1944, with motion in his knee from 180-70° with pain.

Case 2.—Pvt. E. F. F., white, aged 23 years, was admitted to the hospital 28 June 1944. Patient struck his toe against a stump, stumbled and fell, twisting his left knee, 1 June 1944 in Italy. He had pain, swelling and was not able to fully extend his left knee and entered another hospital, before being transferred here. On admission, there was moderate swelling, no areas of particular tenderness, the left knee was "locked" in 10° flexion. Exploratory arthrotomy done 4 July 1944, and the only pathology found was a loose body that had been fractured from the articular surface of the patella. Convalescence was uneventful and he was discharged to limited duty, 11 September 1944 with motion in his left knee from 180-90 degrees, with occasional pain in his knee.

Case 3.—Cpl. B. C. H., white, aged 19 years, was admitted to the hospital 24 July 1944, having been transferred from another hospital. Patient fell and twisted his left knee while playing baseball 4 July 1944 in North Africa. On admission there was moderate swelling of his left knee, and motion in his knee was 165-90°, with marked pain and muscle spasm on attempting to extend his knee. An exploratory arthrotomy was done on his left knee 29 July 1944. A fractured fragment of bone and cartilage from the articular surface of the patella was removed from the joint cavity. No other pathology was found. Convalescence was normal and he was discharged to duty at a Convalescent Center, 4 September 1944.

Case 4.—Pvt. H. F. M., white, aged 20 years, was admitted to this hospital 3 November 1944. Patient slipped, twisting his left knee and fell while stringing wire 17 October 1944 in Italy. Admitted to another hospital where plaster cast was applied and removed when patient was transferred to this hospital. The left knee was moderately swollen, and full extension was not possible and reproduced pain, referred to the center of the joint. Flexion was possible to 100°. There was also tenderness over the medial meniscus. Exploratory arthrotomy was done 11 November 1944 at which time, the medial meniscus was found to have a bucket handle tear, and there was a loose body on the lateral aspect of the knee. Medial meniscus and loose body were removed. Convalescence was uneventful and patient sent to duty at a Convalescent Center, 29 December 1944.

*This paper was written while the author was still in the Army, as a member of the 45th General Hospital.

Case 5.—Pvt. H. L. J., white, aged 22 years, was admitted to the hospital 4 January 1945. Patient had a sudden pain in his left knee, while kicking a football, 16 December 1944, in Italy. Admitted to another hospital where he remained, with knee at rest until transfer here. There was moderate swelling and tenderness about the entire anterior half of the knee. Motion present was from 170-100 degrees, with pain at these extremes. Roentgenograms showed a calcific nodule in the joint space. Exploratory arthrotomy done 6 January 1945, revealed a fractured fragment of cartilage and bone which originated from the articular surface of the patella, which was excised. There was no other pathology. Convalescence was uneventful except that he still had a slight limp, but motion in his knee is 180-80°. Discharged to limited duty 15 February 1945.

Discussion of Cases

In all of these cases an indirect injury or twisting of the knee occurred. A fall when it occurred following the twisting was not a violent one. The disability that followed was immediate and continuous until operation. Disability consisted of pain, swelling and "locking" of the knee.

The symptoms and signs in all these cases indicated an internal derangement of the knee. The derangement was thought to be due to a dislocation of the internal meniscus in all but one case, where there was evidence of a calcific mass present in the joint. There was an associated dislocation of the internal meniscus in only one case and a loose meniscus in another, with an associated loose fractured fragment. All these patients had a period of bed rest for at least a week following their injury, with persisting acute symptoms and signs in their knee.

There was no thickening of the synovium, or significant atrophy of the quadriceps muscle, probably because of the acuteness of the lesion. Pain was not a localizing factor. As mentioned before, but will bear repeating, roentgenograms were negative except in one case where a calcific mass was seen. There was no thickening of the patellar fat pad, nor was there any pannus formation in the joint.

The only gross pathology noted at operation was the loose fragment of bone and cartilage in the joint, that had been fractured and extruded from the articular surface of the patella.

Comment

The lesions just reported in five patients were acute and believed to be traumatic in origin. There was no history of any difficulty with their knees prior to injury. I cannot explain in just what manner this lesion or fracture occurs. At time of operation, there was none of the inflammatory reactions found to suggest an osteochondritis, as are usually found in association with somewhat similar lesions. The operative treatment is quite simple; localizing and extracting the loose body. All of these patients have returned to either full or limited duty in 4 to 9 weeks. It is too early to state whether any arthritic symptoms will develop later but they have made a satisfactory early recovery and this should preclude its formation.

This lesion is not a frequent finding in knees with internal derangement, and it behooves the operator to make a thorough inspection of the knee before doing any definite surgery. This will remove the chances of overlooking a loose body, particularly in addition to an injured meniscus. Negative roentgenograms cannot always be trusted to relieve the operator of his responsibility of making a thorough investigation of the knee joint.

300 Wainwright Building.

DIVERTICULA OF THE JEJUNUM—WITH REPORT OF TWO CASES*

CARRINGTON WILLIAMS, M.D., F.A.C.S.,
and
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Diverticula occur in all parts of the digestive tract, being most frequently found in the left colon and diminishing in frequency upward to the stomach. Such diverticula as patent branchial clefts and Meckel's diverticula are remnants of embryonic structures which normally are obliterated. Others throughout the tract are either congenital malformations or acquired pouches.

The congenital or true diverticula are thought to be due to abnormal embryonic development. They

Fig. 1—Case 1. Roentgenogram showing diverticulum in the upper part of the jejunum.

contain all of the layers of the gut from which they spring.

The acquired or false diverticula are thought to be due to herniation of the mucous membrane of the gut through a weak spot in the wall of the gut. This spot is usually along the course of a nutrient blood vessel and the weakness at this spot may well be due to abnormally large tracts for the vessel due to abnormal embryonic development. This minute weak spot in the gut wall may be compared to the infinitely larger weak spot at the umbilicus which results in hernia.

The presence of diverticula in the jejunum is exceedingly unusual. About 300 cases have been reported. They are most often found along the mesenteric border of the bowel and may be included in the leaves of the mesentery. Occasionally they are single but more often are multiple and may occur in large numbers. They are fortunately located in

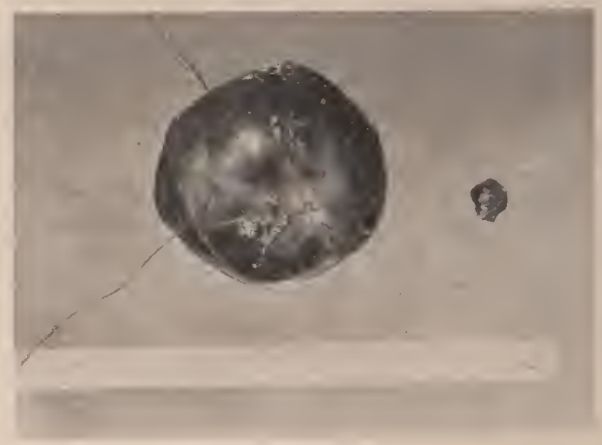

Fig. 2—Case 1. Photograph of diverticula.

a definite segment of the bowel. The size of the pouch is very variable; some are minute, others quite large. The opening from the pouch into the gut also may be relatively small or large. In general, the single diverticula are larger than the multiple.

The wall of the true diverticulum contains all of the layers of the bowel but some of the layers, notably the muscle layers, may be attenuated.

As in other parts of the intestine, the mere presence of diverticula does not result in abnormal function, so that there is no manifestation of their presence until some complication develops. The symp-

*Read at the Richmond Academy of Medicine, November 13, 1945.

toms which develop may be acute or chronic. When the diverticula become acutely inflamed the symptoms of acute abdominal inflammation develop, and the inflammation may result in perforation with local or general peritonitis. This inflammatory process results in abdominal pain, nausea, vomiting, fever, distention, muscle spasm or rigidity, and leucocytosis. The location and severity of the symptoms and signs are variable but they are most frequently in the upper abdomen. After perforation the picture would be similar to other acute peritoneal inflammations and vary according to the extent of the process and to the success of localization.

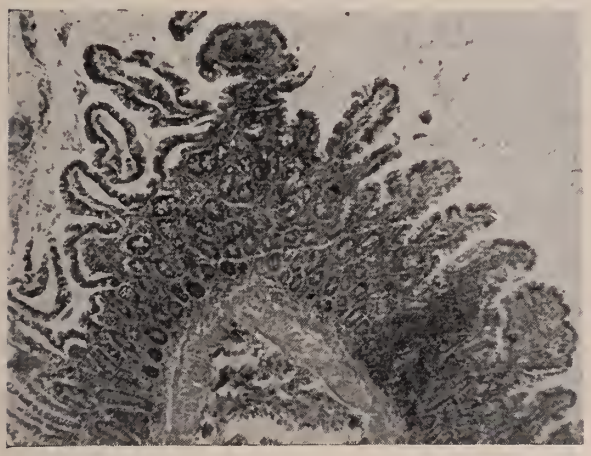

Fig. 3—Case 1. Photomicrograph of wall of diverticulum.

The chronic cases are even more variable in their manifestations. If the inflammation results in considerable infiltration of the neighboring bowel, symptoms and signs of partial obstruction may be present. If diverticula become filled with intestinal contents and empty poorly, vague pains, flatulence, and intestinal disturbances occur. There is no characteristic picture to guide one to the diagnosis except x-ray demonstration of the diverticula. This examination is contraindicated in acute inflammation and is not always successful in the chronic cases.

The treatment is surgical. When there is only one diverticulum or when several are present and are sufficiently separated, excision of the pouch or pouches may be done. When they are numerous or located very close together the segment of the bowel involved should be resected. In the acute cases the inflammation may be so severe as to make excision or resection too hazardous; then proper drainage and treatment with a sulfonamide or penicillin should be instituted.

The following cases illustrate the acute and chronic pictures developing from jejunal diverticula:

Case I.—Mr. E. E., age 47, was admitted to the Medical College of Virginia Hospital on December 8, 1944. He complained of pain in the upper part of the abdomen and a feeling of fullness which he has experienced for the past several years. This discomfort was present more particularly after eating but came also at other irregular intervals. In 1932 x-ray examination of the gastrointestinal tract at another hospital was reported to be negative. Five months before admission he had an attack of severe diarrhea which has continued off and on ever since. Re-examination of the gastrointestinal tract by x-ray revealed a diverticulum in the upper part of the jejunum. Recently there has been a considerable amount of tenderness in the right upper abdomen.

Fig. 4—Case 2. Roentgenogram of removed segment of jejunum after injection of barium mixture.

Physical examination was essentially negative except for the tenderness on deep pressure in the right upper quadrant of the abdomen. Blood and urine examinations were negative. Removal of this diverticulum was advised and he was operated upon on December 9, 1944. At operation one large and one small diverticula were found. Both opened into the jejunum on the anti-mesenteric border and each opening was small. The diverticula were excised and the defect in the jejunum was closed with a purse string suture. Patient's recovery from the

operation was uneventful and he has been entirely relieved from the discomfort, distention and diarrhea.

The pathological report on the diverticula stated that the walls contained all of the layers of normal jejunum, including two layers of muscle.

Case II.—Miss E. B., female, age 59, was admitted to the Medical College of Virginia Hospital on December 15, 1941. She complained of severe cramp-like pain in the abdomen of 24 hours duration. Four hours before admission the pains became very much more severe and were accompanied by

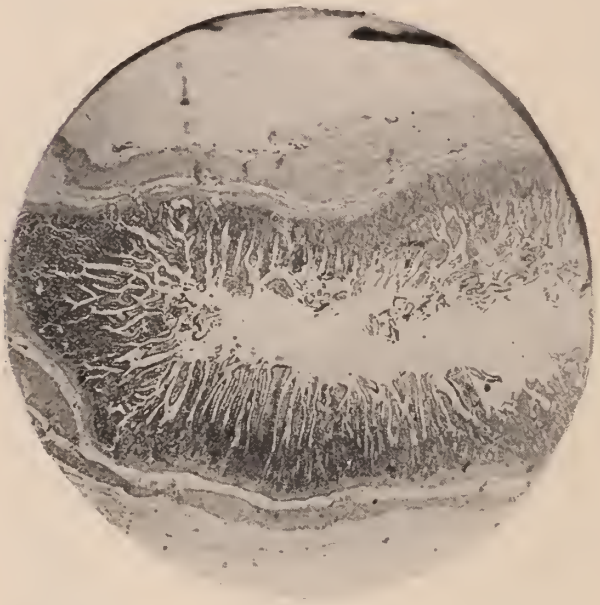

Fig. 5—Case 2. Photomicrograph of wall of diverticulum.

nausea and vomiting. There had been no bowel movement for 24 hours. Her past history revealed that appendectomy and resection of the right ovary was done in 1917; cholecystectomy and gastroenterostomy were done in 1918. The last operation was done on account of ulcer of the stomach. She was entirely relieved of her complaints by these operations and has remained well until the present illness.

Examination showed an acutely ill patient. Temperature 102°; pulse 80; respiration 20. Examination of the abdomen showed it to be greatly distended, tender throughout, especially in the right lower quadrant, and tympanic. No mass was felt. On pelvic examination a mass could be felt to the left of the uterus about 4 inches in diameter and quite tender. Diagnosis was ovarian cyst, strangulated by a twisted pedicle, and immediate exploration was advised.

The abdomen was opened by a low incision and bilateral ovarian cysts with twisted pedicles were found. These were removed with the uterus and further exploration revealed an inflammatory mass above and to the left of the navel. The incision was extended and the inflammatory mass was found to have resulted from a perforation of one diverticulum which was well walled off by adjacent loops of bowel. A large number of other diverticula were seen along the mesenteric border in a segment of jejunum about 24 inches in length. The perforated diverticulum was excised and the small defect in the bowel wall was closed with a purse string suture. Patient made a very satisfactory recovery following operation and returned to the hospital about six weeks later in good condition for resection of the segment containing the diverticula. This operation was done on July 22, 1941. The segment of jejunum containing the diverticula was excised and an end to end anastomosis was made. She again recovered uneventfully and has remained well since that time.

The pathological examination showed that the wall of the diverticulum corresponded to the wall of the jejunum and contained all of the layers found in normal bowel.

These cases represent the congenital type of diverticula because all of the layers of the bowel wall were present in the walls of the diverticula. Case II further indicates one serious complication which may occur when they become acutely inflamed. Case I represents the vague picture of a chronic disorder and the relief which may be expected by removal of the cause.

SUMMARY

The condition described is rare, there being only about 300 cases reported.

The clinical picture resulting from inflammation or irritation may be acute or chronic.

The diagnosis cannot be positively made before operation unless the diverticula are demonstrated by x-ray examination.

The treatment is removal of the diverticula either separately or by resection of the segment of bowel involved unless the acute inflammation is so severe that the procedure would be too hazardous. In the latter case drainage or other appropriate treatment for peritonitis should be instituted and the bowel resected later.

BIBLIOGRAPHY

1. Rudder, F.: Acute Diverticulitis of Jejunum—Case. *Surgery* **14**:921-923, December, 1943.
2. Dixon, C. F., and Waugh, J. M.: Non-Meckelian Diverticula of Jejunum and Ileum. *Ann. Surg.* **118**: 377-393, September, 1943.
3. Van Ravenswaay, A. C., and Winn, G. W.: Jejunal Diverticula—Consideration of Clinical Symptomatology and Case Report. *Am. J. Digest. Dis.* **10**: 108-111, March, 1943
4. Edwards, H. C.: Diverticulosis and Diverticulitis. *Practitioner* **149**:145-150, September, 1942.
5. Levitt, A., and Goldstein, K.: Diverticulosis—Analysis of 86 Cases. *Rev. Gastroenterol.* **8**:439-446, 1941.
6. Kozinn, P. J., and Jennings, K. G.: Jejunal Diverticulitis Occurring in 2 Year Old Girl. *Am. J. Dis. Child.* **62**:620-623, September, 1941.
7. Schunk, P. M.: Traumatic Rupture of Jejunal Diverticulum. *Rocky Mountain M. J.* **30**:327-328, May, 1939.
8. Bunch, G. H.: Congenital Factor in Acquired Diverticulosis of Jejunum and Ileum. *South. M. J.* **32**: 919-921, September, 1939.
9. Turner, P.: Multiple Diverticula of Jejunum—Case. Guys' Hospital Rep. **89**:32-46, January, 1939.
10. Hubeny, M. J.: Diverticulosis of Small Intestine—Case with Intestinal Obstruction. *Am. J. Roentgenol.* **40**:689-694, November, 1938.
11. Gerster, J. C. A.: Diverticula of Jejunum. *Ann. Surg.* **107**:783-800, May, 1938.
12. Guthrie, D., and Brown, M. J.: Diverticula of Proximal Intestine, Duodenum, and Jejunum. *Am. J. Surg.* **40**:128-139, April, 1938.
13. Larson, E. M.: Multiple Diverticula of Jejunum. *West J. Surg.* **46**:127-131, March, 1938.
14. Johns, F. S.: Diverticula of Jejunum with Case Report. *South. Med. and Surg.* **99**:265-268, June, 1937.
15. Guthrie, D., and Hughes, F. A., Jr.: Diverticulosis of Small Intestine—3 Cases. *Surgery* **1**:595-607, April, 1937.
16. Rosedale, R. S., and Lawrence, H. R.: Jejunal Diverticulosis. *Am. J. Surg.* **34**:369-373, November, 1936.
17. Edwards, H. C.: Diverticulosis of Small Intestine. *Ann. Surg.* **103**:230-254, February, 1936.
18. Jones, T. J., and Crile, G., Jr.: Diverticula of Jejunum. *Am. J. Digest. Dis. and Nutrition* **3**:120-122, April, 1936.
19. Rosedale, R. S.: Jejunal Diverticulosis. *Surg., Gynec. and Obst.* **61**:223-228, August, 1935.
20. Levy, J. S., and Degroat, A.: Jejunal Diverticula—Review of Literature and Report of 2 Cases. *Am. J. Digest. Dis. and Nutrition* **1**:708-713, December, 1934.
21. Rankin, F. W., and Martin, W. J.: Diverticula of the Small Bowel. *Ann. Surg.* **100**:1123-1135, December, 1934.
22. Abell, I.: Diverticulosis and Diverticulitis of Small Intestine. *Am. J. Digest. Dis. and Nutrition* **1**:193-196, May, 1934.
23. Chapman, J.: Diverticulosis of Small Intestine—Report of a Case, and Review of Recent Literature. *Ann. Int. Med.* **7**:1376-1390, May, 1934.
24. Schmidt, E. A., and Guttman, P. H.: Multiple Diverticula of Jejunum and Duodenum Simulating Gastric Diverticula and Complicated by Cholelithiasis. *Am. J. Roentgenol.* **31**:200-203, February. 1934.
25. Briggs, P. J., and Hurst, A. F.: Diverticulum at Duodeno-Jejunal Flexure Simulating Radiologically a Gastric Ulcer. Guys' Hosp. Rep. **82**:106-113, January, 1932.
26. Biegler, S. K., Bloom, A. R., and Wruble, Jr.: Diverticula of Jejunum with Case Report. *Am. J. Surg.* **17**:109-110, July, 1932.
27. Duckett, J. W.: Diverticula of Small Intestine. *Texas State J. Med.* **28**:473-475, November, 1932.
28. Vorhaus, M. G.: Recognition of Some Less Common Diseases—Duodenal—Jejunal Diverticula. *J.A.M.A.* **94**:165-169, January, 1930.
29. Boling, J. R.: Multiple Diverticula of Small Intestine. *J.A.M.A.* **95**:267, July, 1930.
30. Miller, A M.: Isolated Diverticulum of Jejunum. *Am. J. Surg.* **11**:116-117, January, 1931.
31. Boling, J. R., Multiple Diverticula of Jejunum, with Resection. *J.A.M.A.* **96**:526-527, February, 1931.
32. Parker, C. A.: Duodeno-Jejunal Diverticulum. *Am. J. Roentgenol.* **10**:608-610, August, 1923.
33. Helvestine, F., Jr., False Diverticula of Jejunum. *Surg., Gynec. and Obst.* **37**:1-5, July, 1923.
34. Rothschild, N. L.: Diverticula of Jejunum. *Ann. Surg.* **82**:250-255, August, 1925.
35. Watson, C. M.: Diverticula of Jejunum—Case with Enterolith Causing Intestinal Obstruction. *Surg., Gynec. and Obst.* **38**:67-71, January, 1924.
36. Sheppe, W. M.: False Diverticula of Jejunum. *J.A.M.A.* **82**:1118-1119, April, 1924.
37. Swanberg, H., and Montgomery, E. B.: Solitary Diverticulum of Jejunum. *Radiology* **7**:144-148, August, 1926.
38. Fisher: Quoted by Rosedale.

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ROCKY MOUNTAIN SPOTTED FEVER

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The purpose of this paper is to bring to your attention a condition which is becoming more common each year. Throughout the United States there were reported 454 cases in 1944, 81 of these occurring in Virginia. It was not recognized in Virginia until 1930. Although it was first described a half century ago in the Rocky Mountains, the name is a misnomer in itself as this disease has now been recognized in 42 out of the 48 states (none reported in Maine, Vermont, Rhode Island, Connecticut, Michigan, Kansas), and in Canada and Mexico. Several cases were reported in and around Richmond last summer and I had occasion to see two of these (mother and son) that occurred in the same family at the same time.

Rocky Mountain spotted fever is an acute specific non-communicable disease caused by the virus-like organism Dermacentroxenus rickettsii, which is *transmitted* to the human being by an infected tick —either by biting or by being crushed with the fingers. Animal hosts are many, the most common offender being the rat, but others are: mice, squirrels, rabbits, woodchucks, dogs and sheep. It has been proven that the American dog tick, Dermacentor variabilis can transmit Rocky Mountain spotted fever. It is estimated that 1 to 11 per cent of all ticks are infected with Rickettsii.

The *incubation period* ranges from 2 to 12 days. During the prodromal stage of 1 or 2 days the patient is listless, anorexic and fretful. Shortly thereafter high fever (T. 104-5), chills, severe headache, restlessness, delirium, lumbar backache, muscle soreness, hyperesthesia, cough, constipation, epistaxes develop. The fever remains high 7 to 10 days with morning remissions, after which it gradually falls by lysis in 2 or 3 weeks. However, the severe types may die by the 7th or 10th day. The *fatality rate* has varied from 5 to 20 per cent, with the very young and very old being the sickest. As a rule children are not as sick as adults. (This was certainly true with our mother and son cases.)

Anywhere from the 3rd to the 7th day after the onset of the disease *the rash*, which is the most characteristic feature of the condition, appears. In the beginning it is seen on the wrists and ankles and may be brought out or exaggerated by the tourniquet test. The rose colored macules at first disappear on pressure, but later these lesions become papular, darker red or purple in color, remain after pressure and may be easily palpated. If these spots remain pinkish and discrete the prognosis is good, but if they become dark purplish and confluent it is more grave. In protracted cases the rash may appear and fade away several times with each rise in temperature. The rash which started first on the wrists and ankles usually spreads on the extremities to the palms of the hands and soles of the feet and then to the body, chest and face. In the severe cases a purplish or brownish pigmentation remains for many weeks or months after convalescence. (The mother still had hers two months after recovery.)

Other *physical signs* may be: anxious expression, dusky complexion, stiff neck (20 per cent), Kernig's sign, meningismus and enlarged spleen. When the pulse, which may be slow at first, gradually gets faster and weaker and persists above 120 per minute, this is a bad prognostic sign as it denotes weakening of the myocardium.

I will not discuss the three *clinical types* other than to mention that there are mild, severe and fulminating cases. The most fatal cases have occurred in the West and fewer in the East so far.

The only constant *pathologic* findings are subcutaneous hemorrhages and enlargement and congestion of the spleen. The fundamental lesion is vascular, consisting of endothelial swelling, proliferation or even vascular occlusion, endothelial necrosis or thrombosis. Scrotal gangrene occurs occasionally.

Laboratory findings may clinch the diagnosis as the

(1) Weil-Felix reaction may be positive in agglutinations of B. proteus X 19 in dilutions of 1:240 or higher (however, this may be present in typhus fever also), first at the end of 2nd week or about 10th day.

(2) Guinea-pig inoculation with the patients whole blood (intraperitoneally) may reproduce typical symptoms in guinea pig and eventually kill the animal and autopsy verify the typical cutaneous and visceral lesions (virulent form only).

(3) Protection or virus-neutralization tests may help in convalescent stage only.

(4) Cross-immunization experiments with guinea-pigs and known strains of typhus and Rocky Mountain spotted fever may differentiate between the two when all else fails.

(5) The white blood cell count is not constant but is usually 8,000 to 10,000 in the first week and 15,000 to 18,000 in the second and third weeks (our cases both had 5,500 and one without sulfathiazole treatments). Relative mononucleosis (10-12 per cent) usually occurs.

(6) Urine is concentrated, highly colored, and may often contain albumin and casts.

(7) Complement fixation tests specific for typhus fever (7 days to 9 years ago) and not present in Rocky Mountain spotted fever.

(8) Biopsy of skin lesions may differentiate Rocky Mountain spotted fever from typhus fever.

Complications: pneumonia, phlebitis, hiccups, hemorrhage from the nose, intestine or kidneys; and, less commonly, iritis, acute nephritis and hemiplegia.

Concurrent conditions due directly or indirectly to ticks may occur, as streptococcic and septicemic infections, tularemia, and tick paralysis.

Diagnosis:

(1) Contact with ticks (biting or crushing), rodents and domestic animals (dogs especially).

(2) Occurs in endemic area in spring or summer.

(3) Rural communities or outdoor occupations.

(4) Characteristic rash—maculo-papular, pink or purplish, may come and go, and last 3 weeks to 3 months, involving entire body, including palms, soles and face. Starts on wrists and ankles.

(5) Laboratory findings, mentioned above, are very helpful.

(6) Prolonged fever (2-3 weeks) with morning remissions.

TREATMENT

I. *Specific*:

(1) Dr. Norman H. Topping's anti-Rocky Mountain spotted fever rabbit serum, in early stages, is quite dramatic—Dose= 1 c.c. per kilo of body weight (I.M.). He has used this treatment in

71 cases:	Mortality
52 cases (before 4th day of rash)	=3.8%=(2 deaths)
19 cases (after 4th day of rash)	=10% =(2 deaths)
untreated mortality (average)	=18.8%

(2) Penicillin—probably of no value.

(3) Convalescent serum—no good.

(4) Immune transfusions—no good.

(5) Sulfonamides made the condition much worse in guinea-pigs—(contraindicated).

(6) Intravenous therapy dangerous (damaged heart) regardless of drug used.

(7) Tyrothricin—not effective—experimentally.

II. *General*: Symptomatic and general supportive measures.

III. *Prevention*:

(1) Two *vaccines* may be used—(a) a phenol-formalized emulsion of ground-up infected wood ticks (Dermacentrox Andersoni) (Method of Spencer and Parker), or (b) Live virus or rickettsia cultivated in the yolk sac of the developing chick embryo (method of Cox). This latter is produced by the United States Public Health, Hamilton, Montana, as also by Lederle Laboratories. It is given free by Virginia State Health Department—two *doses* of 2 c.c. each, or three doses of 1 c.c. each, subcutaneously, 5 to 7 days apart; effects last one year only. It prevents mild type and keeps fulminating type from being so severe or proving fatal. Definite value in prevention for short time.

(2) Avoid tick infected areas (under-brush, etc.) in spring and summer.

(3) Dress to protect one's self—high boots, etc. Rarely found more than 18 inches above ground.

(4) Examine body twice daily (hairy portions especially).

(5) Fumigate clothes with carbon tetrachloride or use "DDT".

(6) Remove embedded tick with tweezers or paper, never with bare hands; and cauterize wound with fuming nitric acid.

Only positive findings are given for the sake of brevity.

Case Report—Summary of Findings:

(1) Visit to Drewry's Bluff—played with dog. No tick recognized.

(2) Onset of illness four days later in white boy of 5 years.

(3) High persistent fever with morning remissions occurred for three weeks and dropped by lysis.

(4) Rash appeared first on 7th day of disease and lasted about two weeks. Macules and papules appeared first on wrists and ankles and then spread gradually to entire body, involving the face, palms and soles. Color at first pink and never really dark red or purplish, as in 36 year old mother's case. (Sign of milder condition.)

(5) Palpable liver and spleen, development of cardiac murmurs with tachycardia and excessive weakness.

(6) Negative Wassermann, tuberculin, blood cultures, stool cultures, Widal and other agglutinations (typhoid, paratyphoid, tularemia, undulant fever, etc.) and no malarial parasites found.

(7) Positive Weil-Felix reaction in mother on 21st day of disease, associated with similar incubation and onset as with son—rash, febrile course but more severe symptoms and signs of nervous system involvement (meningismus, etc.) with severe lumbar backache and early menstrual bleeding. L. P. negative.

(8) Leukopenia in son and mother at first—5,500 WBC.

(9) Urine: Concentrated, dark colored, albumin present; granular casts, pus cells (3-6 WBC).

(10) Symptoms: Severe headache, sweating, drowsiness, listlessness, weakness, vomiting, constipation, fever, rash, delirium.

Summary:

1. Two cases of Rocky Mountain spotted fever in the same family at the same time were seen. The mother's symptoms developed within 48 hours of her son's onset.

2. The child's case was definitely milder than that of his mother.

3. The difficulties in reaching a correct diagnosis are emphasized and all obscure fevers of long duration have to be considered.

4. The rash is quite helpful but not pathognomonic. No other test is helpful until the 10th day or later, when the Weil-Felix reaction becomes positive for the first time.

5. Guinea-pig inoculation may be helpful in the long run but proved impractical in these cases.

6. Cross-immunization experiments with guinea-pigs and known strains of typhus and Rocky Mountain spotted fever may be the only sure way these two diseases can be differentiated.

7. Beware of tick pulling on your pet dog; it may be the rare carrier of Rocky Mountain spotted fever.

8. Complement fixation tests specific for endemic typhus fever from 7 days to 9 years ago are not present in Rocky Mountain spotted fever.

9. Biopsy of skin lesions by an expert may differentiate Rocky Mountain spotted fever from typhus fever.

10. Dr. Topping's new anti-Rocky Mountain spotted fever rabbit serum may be very dramatic and life-saving if used early enough.

REFERENCES

1. Spencer, R. R.: Rocky Mountain Spotted Fever. Brennamann's Practice of Pediatrics, Vol. II, Chapter 20 (recently revised 8-1-41).
2. Hutton, Jack G.: Rocky Mountain Spotted Fever. *J.A.M.A.* **117**:6, 413-5, August 9, 1941.
3. Bengtson, Ida A.: Complement Fixation in Endemic Typhus Fever. *U. S. Public Health Reports* **56**:13, 649-53, March 28, 1941.
4. Plotz, H., and Wertman, K.: The Use of the Complement Fixation Test in Rocky Mountain Spotted Fever. *Science* **95**:441, 1942.
5. Edmunds, P. D.: Penicillin in Rocky Mountain Spotted Fever. *R. M. Med. J.* **41**:910, 1944.
6. Topping, N. H.: *Public Health Reports* **58**:757, 1943.

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New Books.

The following are among recent acquisitions at the Library of the Medical College of Virginia and are available to our readers under usual library rules:

Annals of Gynaecology and Paediatry. v.3.
Bodansky & Bodansky—Biochemistry of disease. 1945.
Dietz—Professional adjustments II.
Golden—Radiological examination of the small intestine.
Horsfall—Fungicides and their action. 1945.
Jackson & Jackson—Diseases of the nose, throat and ear.
Jensen—An introduction to sociology and social problems.
Morton—The human foot. Its evolution, physiology and functional disorders.
Nesbit—Transurethral prostatectomy.
Ochsner—Varicose veins.
Psychoanalytic study of the child. Various authors.
Salle—Laboratory manual on fundamental principles of bacteriology.
Smillie—Preventive medicine and public health.

ACUTE OSTEOMYELITIS OF THE SUPERIOR MAXILLA IN INFANTS

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Judging from the number of references in the literature, osteomyelitis of the superior maxilla in infants cannot be regarded as a rare disease. It is uncommon, however, and is frequently not considered in the differential diagnosis of acute inflammations of the face and orbit. Current interest is centered in the prompt response to penicillin therapy and the avoidance of sequestration and subsequent deformity.

Acute osteomyelitis of the superior maxilla is a disease peculiar to infancy and early childhood. The clinical course and physical findings are characteristic. A short prodromal period of fever and digestive disturbance is followed by evidence of severe infection—marked elevation in temperature, redness and swelling of the cheek, the infra-orbital region, and alveolar process on the involved side. Fistulas draining pus are later seen on the hard palate and alveolus. The presence of edema and swelling of the lids, chemosis of the conjunctiva, and proptosis of the globe denote extention into the orbit and formation of a periorbital abscess.

The following table, adapted from Magnus,[1] describes points in the differential diagnosis of osteomyelitis of the superior maxilla and orbital cellulitis:

Osteomyelitis of Superior Maxilla	Orbital Cellulitis
1. First 12 weeks of life—82 per cent within first month.	1. After six months usually.
2. Swelling of lids, canine fossa and hard palate.	2. Swelling of lids only.
3. Staphylococci.	3. Streptococci.
4. Proptosis of globe, chemosis of conjunctiva, ophthalmoplegia.	4. Same.
5. Fistula formation in alveolar process and hard palate.	5. None.
6. Sequestration—tooth may be extruded.	6. None.
7. Swelling and abscess formation in floor of orbit.	7. Swelling and abscess formation medial wall of orbit.
8. Nasal discharge, if present, unilateral.	8. Bilateral nasal discharge usually evidence of acute ethmoid and maxillary sinusitis and respiratory infection.

The etiology of osteomyelitis of the superior maxilla in infants has been ascribed to a variety of causes; the following factors have been mentioned in the literature:

1. Direct extension from antral empyema
2. Trauma to gums
   a. at birth
   b. daily cleansing of mouth
   c. nipple or pacifier
3. Trauma to maxilla during delivery
4. Infection from genital tract of mother.
5. Hematogenous
6. Infection starting around tooth buds.

Osteomyelitis of the maxilla in adults, which is a less fatal disease, is caused by dental infections, trauma to the maxilla, or follows operative procedures on the maxillary sinus.

In as far as the staphylococcus aureus is the usual causative organism in acute osteomyelitis of the superior maxilla in infancy, early recognition is imperative in order to take advantage of its sensitivity to penicillin therapy. Delay in diagnosis and treatment increases the extent of bony damage. Osteomyelitis of the maxilla tends to localize; in the case of osteomyelitis of the frontal bone, due to the anatomic arrangement of the venous drainage, the infection spreads over the cranial vault, and extends intracranially.

Case Report:—R. G., a month old infant, was hospitalized on October 2, 1945. The mother stated that on September 30 the baby seemed to be feverish and to have cramping pains in the abdomen. The next morning the temperature rose to 102°. She noted a slight puffiness of the left lower eyelid

and a watering of the eyes. The past medical history was negative. The baby was breast fed, but had been given a hard rubber nipple to use as a pacifier.

The initial examination showed a well nourished baby weighing 7 pounds 14 ounces. The temperature was 103.8° F., Hb. 80 per cent, R.B.C. 4,730,000, W.B.C. 19,800, 34 per cent P.M.H., 66 per cent lymphocytes, urine negative. A radiogram of the chest showed clear lung fields. There was some redness and swelling of the left lower lid and over the left cheek. The baby was placed on sulfadiazine therapy. For three days the temperature ranged from 101°-102.5°. The redness and edema of the lid increased and the left eye started to proptose. The bulbar conjunctiva became markedly chemotic. It was then first noted that the left side of the palate and the alveolar process were red and swollen, and a draining fistula was present on the hard palate and the posterior portion of the alveolus. The response to sulfadiazine was considered unsatisfactory. Five thousand units of penicillin every 4 hours was prescribed. The proptosis of the globe and lid swelling became progressively more marked. On the fifth hospital day, an incision and drainage of the floor of the orbit evacuated a large subperiorbital abscess. Culture of the pus was reported staphylococcus aureus.

The baby improved rapidly, became afebrile, and was discharged on October 10. He weighed 8 pounds 8 ounces, a gain of 10 ounces in spite of the severe pyogenic infection. The fistulas healed with no evidence of sequestration.

COMMENT

The cause of the suppuration of the maxilla which pointed both in the orbit and inside the mouth was likely the trauma of the pacifier used almost since birth. The presence of the fistula in the molar region, however, suggests the alternate possibility of a staphylococcus infection of the sockets of the unerupted first deciduous molar tooth. The prevention of sequestration of the maxilla and the loss of deciduous teeth and permanent tooth buds is attributed to the penicillin therapy. Prompt, adequate, surgical drainage is as important as chemotherapy in securing a successful result. The diagnosis is readily made from cases of orbital cellulitis and sinusitis by careful examination of the mouth. X-ray of the maxilla is of little help, except in the differential diagnosis of acute ethmoid and acute maxillary sinusitis. The latter diagnosis is not easy to make in infancy. The sinus is very small and difficult to evaluate on clinical and x-ray examination. Except for the buccal signs, an acute empyema of the antrum with associated orbital cellulitis and severe osteo periostitis simulates osteomyelitis of the superior maxilla. However, empyema of the antrum is rare in infancy. It usually accompanies acute contagious diseases and inflammation in other portions of the respiratory tract. Like a purulent inflammation of the ethmoid sinuses in infancy, it is usually a benign process and responds to conservative treatment. The appearance of edema of the lower lid in infancy is an early indication of infection in or around the maxillary bone. This is due to the profusion of anastomotic vessels in early life. An ostitis or thrombo-phlebitis arising from inflammation in the maxilla or in the paranasal sinuses can be detected at an early stage by this sign. Acute dacryocystitis should also be considered in the differential diagnosis. The complication of broncho pneumonia, septicemia, and brain abscess is avoided by early diagnosis and treatment. If a discharging sinus persists, sequestectomy weeks later may be necessary.

REFERENCE

1. Magnus, J. A.: *Brit. J. Ophth.* **28**:135-8, March, 1944.

THE CLINICAL SIGNIFICANCE OF HEMANGIOMATA OF THE LEG*

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The term hemangioma might be defined simply as a tumor made up of a mass of blood vessels. Excluding the hemangiomata of the skin, i.e., birthmarks, port-wine stains, etc., which are mainly disfiguring in their effects, this communication intends to deal briefly with the less common types, but, importantly, the more serious types which are occasionally seen.

There are four principal reasons why hemangiomata of the leg are important clinically. The foremost difficulty is caused by the circulatory disturbances accompanying a free connection with the general circulation, either arterial or venous; second, the osteohypertrophy and shortening of the affected limb which frequently are attendant; third, the destruction of the organ or tissue in which the tumor happens to lie; and, fourth, the pain, swelling, and disfigurement accompanying their presence.

Should the angioma connect freely with the arterial tree, a circoid aneurysm is the most frequent result. This lesion, also termed congenital arteriovenous fistula, is characterized by a large pulsating mass of dilated veins, over which a thrill is frequently felt, and a systolic and diastolic bruit heard. The common location in the leg is between the femoral artery and vein. It is of importance because of the "short-circuiting" caused by such a lesion, and the subsequent increased venous return, right heart strain, and cardiac hypertrophy.[1] In addition, venous blood from the affected leg will show increased oxygenation over that of the opposite extremity; there will be an increased circulating blood volume,[1] and the patient may show lengthening of the involved extremity due to the enriched and increased blood supply.

Should the angioma connect freely with the venous side, i.e., through absent or defective valves, there will arise dilatation due to pressure in the vascular mass, more or less varicosities as we ordinarily use the term, and local and general circulatory symptoms. An angioma of this type might be spoken of as a "pool", or "lake", which, upon assuming the erect position, may capture a portion of the circulating blood volume sufficient to cause syncope. Lee and Freeman[2] report blood pressure falls from 120/70 to 80/60 upon going from the horizontal to the upright, and pooling within the tumor to the extent of over 500 c.c. This lesion is nearly always congenital, but may not cause marked circulatory disturbance until an attack of thrombophlebitis intervenes, causing destruction of the vein valves.

Osteohypertrophy and/or shortening of the leg[3] are not infrequently associated with extensive angiomata. The exact causative factors of these findings are not clearly understood. Shortening of the leg is believed, however, to be caused by inadequate tissue oxygenation.

Although the majority of these tumors occur in the soft tissues, they are also found in bone. They are relatively benign, however, the principal difficulty arising from the effects of local attrition by pressure. Ackermann and Hart[4] report a case followed over a 10-year period with fair results from roentgen therapy. Pathological fractures are not uncommon.

By far the greatest number of complaints arising from this condition are pain and swelling on dependency and exercise. Swelling can become so severe as to limit or prohibit walking, and the pain on exertion is sometimes very extreme, and may resemble the intermittent claudication seen in other peripheral vascular disorders. A prominent diagnostic sign of this lesion is x-ray evidence of phleboliths within the vascular spaces.[5] Ulcers often develop, the peripheral pulses are normal, and the skin temperature is higher on the affected side.

A brief case report is included to illustrate some of the points mentioned.

CASE REPORT

Miss W.W., a white female, age 19, was admitted to the Medical College Hospital on April 16, 1945, with chief complaints of varicose veins, pain and swelling of her left leg. She stated that this condition had been present since birth, and that the pain and swelling had become more marked in the last 2½ months. There had been no fainting upon arising, but moderate exercise was accompanied by calf and thigh pain. There was no history of thrombophlebitis.

*From the Department of Surgery, Medical College of Virginia.

Physical Examination.—Examination revealed a well-developed female of stated age. Her left thigh and buttock was the site of an extensive bluish mass, apparently subcutaneous, extending from the upper lateral buttock to below the knee. There was one especially prominent vascular area on the lateral aspect of the buttock, as shown in Figure 1. This

Fig. 1.—Tumor can be seen extending from the upper lateral buttock to below the knee. Note prominent varicose area.

vascular mass became slowly suffused upon standing, and emptied slowly upon assuming the horizontal position. There was no evidence of syncope. Blood pressures taken in the arm and leg in the vertical and horizontal positions showed no significant change. No abnormal sounds were heard or thrills felt over the involved area.

Routine blood, urine and Wassermann analyses were within normal limits. The venous oxygen saturation was 65 per cent in the affected leg, and 70 per cent in the unaffected; the venous pressures were normal bilaterally. There were no cardiac abnormalities, no bony changes in the involved leg, and no evidence of shortening or lengthening. On April 30, a saphenous ligation together with excision of the prominent varicose area was accomplished. As noted by Lee and Freeman,[2] much difficulty was encountered in wound healing. Prolonged oozing occurred, and hospitalization was appreciably lengthened. The patient had one episode of septic temperature apparently due to thrombophlebitis within the tumor mass, which subsided under penicillin therapy.

Pathological diagnosis was venous hemangioma of the skin. She was discharged on May 29 slightly improved, to return in two months for further treatment.

This case serves to illustrate some of the symptoms of hemangiomata of the leg, and highlights the difficulties in adequate therapy. Many types of treatment have been resorted to for this lesion with varying degrees of success. The treatment of choice for circoid aneurysms is surgical excision of the fistulous area, plus excision of the vascular mass. This will entail ligation of a major artery, and gangrene of the extremity would be the result were it not for the fact that an arterio-venous fistula enormously increases the collateral circulation. Even so, gangrene is a major concern. It is frequently quite difficult to ligate all the vessels communicating with the mass, and recurrences are frequent.

As to the hemangiomata which connect freely with the venous circulation, therapy is variable, depending upon the individual case. Generally speaking, the method of choice is ligation of the veins connecting the angioma with the general circulation, and allowing the mass to become obliterated by thrombosis. Sclerosing agents have been used with variable results. X-ray radiation has been tried with little success. Some cases will respond only to complete excision of the vascular tumor. Weaver and Rumold[6] report a case requiring amputation of the buttock to effect a cure.

The problem of osteohypertrophy and shortening is largely one of prevention. In this regard, it becomes important that such angiomatous lesions be treated early in life, and followed over a prolonged period.

To recapitulate briefly, hemangiomata of the leg are important clinically chiefly from the standpoint of the pathological physiology they engender within the cardio-vascular system. Osteohypertrophy and growth disturbances of the extremity may accom-

pany this lesion. Ligation and excision of the vessels connecting the mass to the general circulation, allowing the tumor to obliterate by thrombosis, is the treatment of choice. Selected cases may require complete excision of the tumor mass.

BIBLIOGRAPHY

1. Holman, E.: Arteriovenous Aneurysms, The Macmillan Co., New York, 1937.
2. Lee, W. E., and Freeman, N. E.: *Annals of Surgery* **112**:960, 1940.
3. Reid, Mont R.: *Am. Jour. of Surgery* **14**:17, 1931.
4. Ackerman, A. J., and Hart, M. S.: *Am. Jour. of Roent.* **48**:47, 1942.
5. Fulton, M. N., and Sosman, M.C.: *J.A.M.A.* **119**:319, May 23, 1942.
6. Weaver, J. B., and Rumold, M. J.: *Am. Jour. of Surgery* **60**:149, 1943.

Veterans Administration.

The Veterans Administration is seeking medical rehabilitation workers with experience in handling convalescent patients to carry out the intensive program planned in VA hospitals, according to Dr. A. R. Dawson, chief of medical rehabilitation in the Richmond Branch. Occupational and physical therapy as developed and refined in Army and Navy hospitals proved valuable in speeding recovery of war-time casualties, and it is from among the skilled therapists trained in the military convalescent services that VA expects to draw most of its staff to carry on the reconditioning program. Salaries for positions open in this field range from $1,902 to $3,640. VA is constructing medical rehabilitation facilities at its existing hospitals in Virginia, Maryland, West Virginia, North Carolina, and the District of Columbia. Applications from persons having the required educational and practical qualifications are being received at the branch office in Richmond.

"Getting well by doing something" often starts with simple breathing and movement exercises even before the patient is able to sit up in bed. Guided by lay instructors under supervision of medical specialists, the wounded veteran progresses to advanced exercises designed to rebuild specific muscles. At the same time he is being instructed in handicrafts, academic studies and occupational skills, and is engaging in hobbies. While the advance portions of the reconditioning program take on the aspects of vocational rehabilitation, the plan is aimed only at helping the veteran to recover more quickly and more completely.

Tridione for Psychomotor Attacks.

Tridione, a new drug whose effect on epilepsy is still being investigated, has brought spectacular results in some cases of psychomotor seizures, a condition in which mental disturbance is the principal feature of the attacks.

Writing in the March 2 issue of *The Journal of the American Medical Association,* Russell N. DeJong, M.D., from the Department of Neurology, University of Michigan Medical School and University Hospital, Ann Arbor, Mich., says that thus far tridione has not proved to be sufficiently effective when used alone, partly owing to the fact that most of the patients in his study were also subject to other types of epilepsy. These had been treated by anticonvulsant drugs such as phenobarbital and the bromides but in no instance were psychomotor attacks controlled by these drugs. The drugs were continued with the tridione, Dr. DeJong says.

Psychomotor seizures are characterized by loss of memory during which the patient may act like one intoxicated. The attacks may last only a few minutes or they may go on for hours or days. While in this state the patient is morose and irritable and may become ugly or violent if forcibly restrained. Patients are often incapacitated by the attacks, and, as the result of the nature of the seizures, may require custodial or institutional care.

In conclusion the author says that tridione used in conjunction with other anticonvulsants "has almost completely controlled the psychomotor seizures in a large percentage of the cases and has resulted in a decided psychologic improvement."

A STUDY TO DETERMINE THE ANTIBACTERIAL EFFICIENCY OF COMBINED TYROTHRICIN AND SULFADIAZINE

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The purpose of this study was to determine the in vitro efficiency of a mixture of sodium sulfadiazine and tyrothricin as a bactericidal agent against those organisms commonly found in the upper respiratory tract, ear, and infected sinuses.

Tyrothricin, the alcohol-soluble, water-insoluble extract of peptone cultures of Bacillus brevis, is a mixture of at least two substances which have been separated as the crystalline compounds gramicidin and tyrocidine. Tyrothricin in a 1:2000 dilution, and sodium sulfadiazine in a 2 per cent concentration were present in the mixture* used in this study.

Gram-positive bacteria against which tyrothricin is effective in vitro include streptococci, staphylococci, pneumococci and diphtheria bacilli. These organisms are, incidentally, the ones commonly encountered as causes of infections involving skin, soft tissues, nasopharynx and accessible body cavities, such as the paranasal sinuses. The high in vitro antibacterial activity of tyrothricin and its components have been the subject of reports by Dubos,[1,2] Hotchkiss and Dubos,[3] Goodman,[4] Herrell and Heilman,[5,6,7,8,9] Tishler, Stokes, Trenner and Conn,[10] Christensen, Edwards and Piersma,[11] and others.

Tyrothricin is non-toxic but without therapeutic effect when given by mouth. It is both dangerous and ineffective when given by intravenous or intramuscular injection. On local application, its toxicity for tissues is quite low, and it has been widely employed topically and by instillation and irrigation in accessible body cavities without untoward effects.

The literature concerning the antibacterial activity of sulfadiazine is voluminous. It may suffice to say that in general the following organisms are susceptible to its action: Beta hemolytic streptococci, pneumococci, meningococci, gonococci, staphylococci, and Friedlander's bacillus.

*The mixture of sodium sulfadiazine and tyrothricin was supplied for testing purposes through courtesy of the manufacturers, International Chemicals, Washington, D. C.

The above mixture has been commonly used in the treatment of chronic upper respiratory infections and certain types of vaginitis, cervicitis, and otitis externa.

The purpose of this investigation was to determine the in vitro antibacterial properties of a combination of tyrothricin and sodium sulfadiazine in order to determine whether the two chemicals combined would be more efficacious than either alone when used against bacteria commonly found in the upper respiratory tract. The organisms used for this study were either isolated in pure culture from human throats, sputa, or nasal secretions, or obtained from the culture collections at the National Institute of Health, Bethesda, Maryland. It will be noted that several organisms are included in this list that are not ordinarily present in the upper respiratory tract. These were observed for control purposes.

The technic used for this study was as follows: The organism, isolated in pure culture, was grown on a beef infusion agar stab and kept as a stock culture. A loopful of the stock culture was transferred to a tube of beef infusion broth and incubated at 37° C for 12 hours. This tube was diluted 1:10 with sterile broth and 0.1 cc. of tyrothricin-sodium sulfadiazine suspension was added. A similar tube was prepared and 0.1 cc. of 2 per cent sodium sulfadiazine was added, and a tube containing 0.1 cc. of 1:2000 tyrothricin was also prepared. A control tube of the 1:10 suspension was used. All tubes were incubated at 37° C, for 6 hours, and then transferred to a Klett-Summerson Photoelectric Cell Colorimeter, using the number 54 green filter and adjusting the indicator to zero position with a control tube of sterile broth.

Below is a table showing the results of these observations.

A series of tests were carried out during a three months period, and the combined solution remained quite stable as far as its antibacterial action was concerned. Newly-prepared solutions gave results

Organism	Control	Sodium Sulfadiazine		Tyrothricin		Combination	
	Colorimeter reading	Colorimeter reading	Inhibitory effect	Colorimeter reading	Inhibitory effect	Colorimeter reading	Inhibitory effect
Staph. aureus	56	43	+	41	+	35	++
Staph. albus	62	40	+	38	+	36	++
Strept. hemolyticus	44	29	++	27	++	26	+++
Strept. fecalis	30	30	0	21	++	21	++
Friedlander's A	48	32	+	45	0	36	+
Friedlander's B	87	55	+	88	0	61	+
N. intracellularus	29	24	+	27	0	25	+
N. catarrhalis	42	29	+	24	++	30	+
C. diphtheriae	28	27	0	19	+	22	+
C. pneumoniae	37	30	+	22	++	24	+
S. paratyphi	66	63	0	64	0	63	0
S. interitides	86	80	0	75	+	84	+
E. coli	69	64	0	73	0	66	0

which were comparable to those prepared three months previously.

Conclusions

It would appear from the above observations that, at least in vitro, a combination of tyrothricin and sodium sulfadiazine is more efficacious as an antibacterial agent than either alone when used against organisms frequently found in the upper respiratory tract, and tends to confirm clinical findings.

Furthermore, the solution suspension appears relatively stable.

References

1. Dubos, R. J.: *Proc. Soc. Exper. Biol. and Med.* **40**: 311, 1939.
2. Dubos, R. J.: *Ann. Rev. Biochem.* **11**:659, 1942.
3. Hotchkiss, R. D., and Dubos, R. J.: *J. Biol. Chem.* **141**:155, 1941.
4. Goodman, L. S.: *Bull. New York Acad. Med.* **18**:112, 1942.
5. Herrell, W. E., and Heilman, D.: *J. Clin. Investigation* **20**:433, 1941.
6. *Idem: J.A.M.A.* **118**:1401, 1942.
7. *Idem: Proc. Soc. Exper. Biol. and Med.* **46**:182, 1941.
8. *Idem: J. Clin. Investigation* **20**:583, 1941.
9. *Idem: J. Bact.* **43**:12, 1942.
10. Tishler, M., Stokes, J. L., Trenner, N. R., and Conn, J. B.: *J. Biol. Chem.* **141**:197, October, 1941.
11. Christensen, H. N., Edwards, R. R., and Piersma, H. D.: *J. Biol. Chem.* **141**:187, October, 1941.

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Two New Quarterly Reviews.

The Washington Institute of Medicine announces two new publications, the *Quarterly Review of Psychiatry and Neurology* and the *Quarterly Review of Urology,* the first issues of which will be published shortly.

Dr. Winfred Overholser, Professor of Psychiatry of George Washington University School of Medicine and Superintendent of St. Elizabeths Hospital, Washington, D. C., is Editor-in-Chief of the *Quarterly Review of Psychiatry and Neurology.*

Dr. Hugh J. Jewett, Johns Hopkins University, Baltimore, is Editor-in-Chief of the *Quarterly Review of Urology.* Among the members of the Editorial Board is Dr. Austin I. Dodson of Richmond.

THE FORUM

The Virginia Program of Vocational Rehabilitation.

The Virginia State Board of Education provides a service of occupational adjustment to persons who have employment handicaps caused by disability or impairment. It is known as the Service of Vocational Rehabilitation, and was authorized by the State Legislature in 1920. The law was amended in 1922 to enable the State to use federal funds made available for this purpose on a matching basis.

The Rehabilitation Service is interested in the problems of the disabled of work age who can become productive citizens if given the opportunity. The purpose of the Service is to provide them with this opportunity. The Service functions under the direction of trained field personnel working out of eight district offices located at: Norton, Marion, Roanoke, Lynchburg, Culpeper, Halifax, Richmond and Norfolk. At present there are sixteen field workers, known as District Supervisors of Rehabilitation.

The three major responsibilities of this staff are:

(1) To determine the cause of the unemployment or unsatisfactory work adjustment of the disabled persons in their districts. This requires a careful evaluation of the disabled persons' disabilities and limitations—physical, mental, and emotional. In this activity medical advice is essential.

(2) To help disabled persons: (a) decide upon occupations suitable to their remaining abilities; (b) plan and carry out measures necessary to overcome their handicaps; (c) become engaged successfully in such occupations.

(3) To procure for disabled persons such services as they may require in making vocational adjustments, including financial assistance, when necessary.

The disabled person may require a number of services in preparing himself for his work objective. Rehabilitation may provide these services, if not available to him through other sources. Among such services, other than guidance and planning, that may be provided, are: physical restoration or the correction or reduction of disabilities through medical, surgical, or therapeutic means or the provision of prosthetic appliances; trade or vocational training in an established school or shop; living maintenance in a training program; supervision of preparatory services; placement and follow-up in employment to assure adjustment.

The physical restoration service is the phase of this program likely to be of most interest to physicians. In 1943 the State Board of Education, for the first time, was permitted to use state-federal matched funds to pay for hospitalization, surgery, and treatment under certain conditions. For its guidance in the proper development of this phase of the service, the State Board of Education has sought the advice and cooperation of the medical profession. The Medical Society of Virginia has appointed a Committee on Rehabilitation. This Committee has been named by the State Board of Education as its Medical Advisory Committee for the Division of Rehabilitation.

Laws and regulations under which the Rehabilitation Division operates require that certain conditions be met before rehabilitation funds can be used in paying for any physical restoration service for any of its cases. These conditions are as follows:

(1) The client—man or woman, white or colored—must be financially unable, from his own or any other available resources, to pay the whole cost of the physical restoration service indicated in his case.

(2) The client must be of work age and must have been classified by the Rehabilitation Division as potentially employable.

(3) The disability must have been determined by the Rehabilitation Division, with medical advice, to constitute an employment handicap.

(4) The disability must have been determined medically to be static and one which can be removed or materially reduced within a reasonable length of time and at a reasonable cost.

When the circumstances in the case meet these requirements, the Rehabilitation Division may authorize the expenditure of funds under the following conditions and for the following services:

(1) Hospitalization in a recognized hospital at an inclusive per diem cost rate established on the basis of that hospital's actual cost experience in the preceding fiscal year, but in no one case for a period of more than 90 days.

(2) General and special medical examinations,

surgery, medical treatment, or other therapy on a fee schedule having the approval of the Medical Advisory Committee, when these services are not included in the calculation of per diem costs by the hospital in which the client is a patient.

(3) Prosthetic appliances required to improve employability.

Rehabilitation clients who may require financial assistance in the procurement of necessary physical restoration services are medically indigent persons who can be made fit to engage in useful work. They are persons whose financial status must be shown to be such that they cannot provide an amount, over and above the minimum living requirements of themselves and their dependents, sufficient to purchase needed surgery, hospitalization, treatment or prosthetic appliances.

The funds of the Rehabilitation Service are limited. Authority to pay for the correction or reduction of physical defects in its indigent clients was acquired in 1943. Since that time the Service has paid actual, proven hospital cost and professional fees adjudged by the Medical Advisory Committee to be reasonable. It has assumed these costs only when they could be obtained from no other source. It may render this service only in cases which it has studied and which have been found to meet the requirements set forth above.

Persons in need of rehabilitation service are referred to the Division of Rehabilitation by interested individuals, doctors, hospitals and clinics, public health and welfare offices, schools and other civic agencies.

The Rehabilitation Committee of the Medical Society of Virginia is composed of: Dr. Roy M. Hoover, Roanoke, Chairman; Drs. Paul Camp, Leroy Smith, and I. C. Riggin, Richmond; Drs. F. B. Stafford and Hugh Page Newbill, Charlottesville; Drs. N. F. Rodman and George Duncan, Norfolk; and Dr. G. B. Setzler, Pennington Gap.

A Study of Child Health Services.

TO THE PHYSICIANS OF THE STATE OF VIRGINIA:

The necessity for physicians to be well informed concerning all phases of health and disease in their localities is imperative if they expect to continue to be the leaders in the Health field. Already many organized groups and individuals have been pressing the Congress for legislation in this field.

In order that the physicians may speak with authority on the status of the welfare of infants and children the American Academy of Pediatrics is making a study of Child Health Services to determine the extent and quality of these services. Each state is conducting its own study under the leadership of the state chairman who in Virginia is Dr. James B. Stone. The Virginia Pediatric Society and the president of the Medical Society of Virginia have endorsed this survey. As executive secretary, Mr. Howard O. Burnette has been appointed and the survey is about to begin.

The survey covers (1) Hospital Facilities, (2) Community Health Services, Official and Voluntary, (3) Distribution, Qualification and Activities of Professional Personnel, and (4) Pediatric Education.

One of the fundamental purposes of the present study is to stimulate local groups to discover for themselves the needs of their own communities and the facilities to meet those needs. Essentially, this means the collection of a large scale of adequate and reliable data.

To make it successful each physician must do his part with willingness and accuracy. Physicians in private practice will be asked to complete a short one-page questionnaire concerning their pediatric practice. These questions are entirely impersonal.

The challenge for Health planning for the future lies at the feet of the medical profession. Let us not fail to accept it and its responsibilities.

EMILY GARDNER, M.D., *President,*
Virginia Pediatric Society.

Bernard Shaw's Criticism of the Medical Profession.

Just why Mr. Bernard Shaw for many years has seen fit to criticize the medical profession I never could understand. Since he published his "Doctor's Dilemma" in 1906 he has published many plays; but that probably shows him at his worst. In his latest "column" sponsored by the International News Service he has seen fit to attack the memory of Sir Joseph Lister in terms that would appear to come from a rabid and disordered mind. These opinions of his appeared as late as last November (1945) and were circulated chiefly in England where Sir

Joseph lived and was the chief ornament of an honorable profession.

As long ago as 1871 Mr. Lister was called upon to treat an axillary abscess in her Majesty, Queen Victoria, and he used something quite new in London, a spray of carbolic acid to prevent contamination of the wound and, incidentally, of the surrounding atmosphere. Lister had previously treated a compound fracture of the leg in the Glasgow Infirmary in the same manner very successfully and that gave him confidence in using this method on the queen. As aseptic methods came to the fore under Lawson Tait and Spencer Wells, especially in abdominal operations, Lister gave up the use of the spray.

I remember very well using the large steam atomizers while an assistant to a Philadelphia surgeon when the carbolic spray was in vogue. This was at a time when marine sponges were used again and again in all operations, after repeated boiling, the large flat ones being used intra-abdominally.

Lister discovered that ligatures of sheep's gut (catgut) were absorbable and these soon supplanted silk ligatures whose ends were commonly allowed to hang out of the wound when closed and there were many anxious days before these were safely removed from some of the larger vessels. Of course they afforded a ready pathway for infection. The buried catgut or cotton thread suture has been a blessing to patient and surgeon alike.

Of course all this was before the days of rubber gloves, an indispensable part of aseptic surgical technique, attributed to Halsted of Baltimore.

It is rather strange that a newspaper item written by a layman who has a grudge against the medical profession should serve to recall some of their most precious contributions to the art and science of surgery that will be long remembered when the critic has passed into oblivion.

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Baruch Center of Physical Medicine, Medical College of Virginia.

A fundamental study of the physics and chemistry of muscle—the ultimate objective of which is to improve the treatment of veterans who suffered extensive peripheral nerve lesions in the war—is being carried out at the Baruch Center of Physical Medicine at the Medical College of Virginia. The center is supported by the Baruch Committee on Physical Medicine, founded a year ago by Bernard Baruch, New York philanthropist.

The behavior of muscle tissue and the relations between nerve and muscle remain among the most perplexing fields of physiology, although their importance is obvious from the fact that the human body in action might be considered as a nerve-muscle machine.

There were hundreds of war injuries to arms and legs, especially from land mines, which resulted in severed nerves leading to muscles, followed by progressive atrophy of the muscles themselves.

The basic experimental work at the Medical College of Virginia is under the direction of Dr. Ernst Fischer, widely recognized for his fundamental studies on the physiology and bio-chemistry of denervated muscle. Although possible improvement in treatment of the war wounded seems at present the most important practical application of these studies, any fundamental findings may have a wide application in other abnormalities of the nerve-muscle complex, as for example those found in poliomyelitis.

Dr. Fischer wishes to know what actually happens when muscle atrophies. This might lead to a rational treatment program rather than one based entirely on empirical findings. Preliminary experiments already have shown demonstrable and measurable changes taking place in some of the constituents of muscle tissue.

When nerve fiber is severed, the end cut off from the central nervous system soon dies. The segment still connected with the spinal column survives and starts to grow out again to fill in the gap. Normally this growth is very slow—approximately an inch a month. The nerve is trying to find its way back to the muscle to which it once was connected. But, unless it connects at once with the cut off segment, it is fumbling in the dark. Nerves, apparently, have no "homing instinct". In many war injuries there may be a gap of several inches between the segments. The growing nerve cannot find its way across this gap unless it is guided and the only practical way to do this is by nerve grafting. A segment of nerve fiber is grafted across the space, connecting the live, growing nerve with the dead nerve. The graft itself soon dies, but this makes no difference. The centrally connected segment will grow along the path of the dead graft, its growth

will be considerably accelerated, and it will find its way to its appropriate muscle. With best surgery, the nerve grows as much as two inches a month.

Now muscle detached from its nerve supply progressively atrophies, losing its capacity for contraction. If this atrophy progresses very far it becomes essentially irreversible. The sooner the nerve connection is restored, the better the chances for a useful muscle, but the slow rate of nerve growth makes prospects quite dim where there is a wide gap. Animal experiments have demonstrated, however, that both by massage and electrotherapy, the progressive atrophy of muscle can be delayed significantly, although not altogether prevented. The indicated lines of research are two-fold: first, to find methods of accelerating nerve growth, and second, of delaying muscle atrophy as long as possible.

The technique of nerve grafting has been greatly improved by surgeons throughout the world during the war. The second half of the problem is under attack at the basic research laboratory of the Baruch Center of Physical Medicine at the Medical College of Virginia.

Aside from war wounds, the field in which nerve degeneration and muscle atrophy is best known is poliomyelitis and it may be expected that important light will be thrown on the nature and treatment of the after-effects of this malady. It is somewhat more complex, however, than the wound problem where, in the beginning, only the nerve is affected. There is no certainty that in polio the muscle itself may not be affected in some obscure way by the disease processes, even before the atrophy due to losing nerve connections has started. This possible effect on muscle is one of the problems to be faced in the future.

Third Refresher Course.

The third of four Refresher Courses given conjointly and alternately by the Medical College of Virginia and the Department of Medicine of the University of Virginia every three months for one year will be held in Charlottesville from June 3rd to the 15th.

These courses are designed primarily as intensive courses in general medicine and they consist of 36 lectures, 10 ward rounds (choice of two) and 10 ward rounds (choice of four) during the day by local staff members. For the June clinic, the evening speakers will be Dr. Harold G. Wolff of New York Hospital, two evenings on "Headaches"; Dr. I. A. Bigger of MCV will speak on "Surgery of the Heart"; Dr. Harry Beecher, Professor of Anesthesiology at Harvard, will talk on "Preparation of Patients for Surgery" and Anesthesia". During the second week, Dr. E. C. Hamblen of Duke University has been invited for two of the evening talks on "Female Endocrinology"; Dr. Harvey Haag of MCV will speak on "Newer Drugs"; and Dr. W. H. Sebrell, Chief of the Division of Physiology of the U. S. Public Health Service, will speak on "Diagnosis and Treatment of Deficiency Diseases" and "Current Research on Nutrition".

Whereas these courses are designed primarily for returning veterans and the veterans will be given priority in acceptance, nevertheless they are open to all physicians up to a quota of 50 registrants. Anyone interested in receiving the final program, application blank, or any other information about the course should write to Box 1725, University Station, Charlottesville. The tuition for the two-week course is $40.

Normal Human Dried Blood Plasma—Army-Navy Surplus.

1. Source and Distribution of the Surplus Plasma

The American Red Cross is furnishing dried blood plasma without charge for use in civilian medical practice. This material was prepared from blood collected by the American Red Cross for the Army and the Navy and has now been declared surplus to their needs. Supplies of this surplus plasma are provided to *State Departments of Health* by the American Red Cross for distribution to all physicians licensed to practice medicine and surgery and to all acceptable hospitals for use without charge for the product.

2. Description of the Plasma

This plasma has been prepared by commercial firms licensed by the National Institute of Health in the standard Army-Navy packages from blood collected by the American Red Cross. There are two package sizes: one contains 250 cc. original plasma (17 gm. plasma protein), the other 500 cc. (34 gm. plasma protein).

3. THE STANDARD ARMY-NAVY PACKAGE

This consists of a sealed outer carton containing two metal cans. One holds the bottle of dried plasma, the other the distilled water for reconstitution of the plasma. The necessary tubing, needles, and other equipment required for reconstitution and administration of the plasma are also contained in the two metal cans. Instructions for reconstitution and administration are lithographed on the outside of the metal cans. Most of the packages also contain a report form to be filled out and mailed to the Army or Navy Medical Center. This report form may be used if desired for local or state studies but *is not to be mailed to the Army or Navy.*

4. IMPORTANT CONSIDERATIONS IN THE USE OF DRIED PLASMA

a) *Dried plasma must be used within three hours after being put into solution.* If it were contaminated and allowed to stand several hours, sufficient bacterial growth could occur to produce fatal reactions.

b) *Dried plasma must not be restored to the liquid state with diluent which is warmer than 100°F.* The reconstitution of dried plasma at a temperature appreciably higher than normal body temperature may produce changes in the plasma proteins which could give rise to serious or fatal reactions.

c) *Plasma must not be heated during administration.* Such a procedure may also cause reactions through altering the plasma proteins. The control of temperature is too difficult to make it safe to attempt to bring the plasma to body temperature for administration, and, furthermore, clinical research has proven that it is unnecessary to warm any solution given intravenously.

d) *Dried plasma should be stored in a dry place where the temperature does not go below 35°F. or above 120°F.* The bottle of diluent may freeze and break below 32°F. and the dried plasma proteins may be altered above 120°F.

5. INDICATIONS FOR TRANSFUSION

a) The principle functions of whole blood and plasma transfusions may be classified as shown in the accompanying table.

b) Plasma has also been shown to be of distinct value in treatment of the shock which often exists in:

1. Crises of Addison's Disease
2. Diabetic Coma after Dehydration
3. Cholera and Infant Diarrhaea

and as supporting treatment in:

4. Intractable Ulcerative Colitis.

5. CONTRAINDICATIONS FOR TRANSFUSION

There are few contraindications for blood or plasma transfusion, but these should be observed with extreme care. The presence of edema of the lungs due to congestive heart failure or severe pulmonary infections, particularly in infants, is almost always a contraindication. It has been shown that failure of the left side of the heart may be produced by the intravenous injection of as little as 200 cc. of saline in an individual with borderline compensation. In extreme cases edema of the lungs may be produced by the rapid injection of as little as 50 cc. of blood.

7. ADVERSE REACTIONS FROM THE ADMINISTRATION OF HUMAN PLASMA

Adverse reactions from the administration of the surplus dried plasma may be due to any one or a combination of the following:

a) Heating plasma prior to or during administration.

b) Bacterial contamination.

c) Virus contamination.

The processing of plasma to the dried state does not as a rule inactivate a virus. Serum jaundice has been reported to be transmitted by blood and plasma transfusions even though the donor had only a subclinical infection. It is possible, therefore, that some lots of dried plasma may contain an active virus. Serum jaundice may occur from 1 to 4 months after the administration of contaminated plasma. Since it may be a severe and debilitating illness, physicians should only use plasma where definitely indicated.

d) Failure to filter the plasma during administration.

Plasma should *always* be filtered. A filter is included in the administration set provided in the standard Army-Navy package of plasma.

e) Improperly cleaned intravenous equipment.

This should not be a factor if the set contained in the plasma package is employed for administration.

f) Urticarial or anaphylactoid reactions.

The likelihood of these has been minimized

through the use of fasting donors and the rejection of those with an active allergy.

g) Circulatory embarrassment.

Reaction Rates: Army experience with this plasma showed that from 1 to 2 per cent of the plasma transfusions were followed by urticarial reactions, and that approximately 2.6 per cent were followed by chill and fever reactions.

8. TREATMENT OF SHOCK WITH CITRATED PLASMA

The following paragraphs present a brief review of the use and dosage of plasma in shock accompanying hemorrhage, trauma, and burns. The life-saving value of plasma in the treatment of shock is its most striking use in both civilian and military medicine.

Any evaluation of the fluid replacement therapy in shock must consider the extent and degree of the lesion, the age and physical status of the patient, as well as other therapeutic measures undertaken. It is well known that minimal trauma may produce serious systemic reactions in the physically debilitated. In addition, the state of hydration of the patient must be estimated as accurately as possible. This is not always easy under emergency conditions, since laboratory studies may of necessity be deferred.

Shock due to hemorrhage or trauma: In the treatment of shock all that is possible must be done to prevent the initiating factors from acting a sufficiently long time to produce clinical manifestations. The best treatment is, in other words, prevention. Patients exposed to obvious and sufficient precipitating factors must be treated as potential cases of shock without waiting for the appearance of clinical symptoms. Thus, a patient who has sustained extensive injury with crushing of tissues, with or without evident blood loss, should not be submitted to an extensive operative procedure involving general anesthesia without a dose of 25 to 500 cc. of undiluted or original plasma.

In shock due to massive hemorrhage, the clinician must always bear in mind that the need for whole blood transfusions is urgent. Plasma transfusions will almost always tide the patient over if adequate amounts are given promptly enough, but whole blood is needed within a matter of hours if the red cell level has been reduced near to the minimum compatible with adequate oxygenation of the body tissues. In any event the red cell level should be brought to normal as soon as possible to help create in the patient the optimal state for recovery.

Patients in shock, with such manifestations as cold, moist skin, grayish-blue color, feeble and rapid pulse, blood pressure unchanged or slightly lowered, must be treated immediately and adequately. The management of early shock is as a rule a simple and successful procedure, whereas late shock is often very difficult to combat. The line of demarcation between early shock and late shock divides the patients who can be successfully treated with relatively small doses (250 to 750 cc. of undiluted plasma) and those in whom larger doses (750 to 1,500 cc. or more of undiluted plasma) must be employed repeatedly with only a fair chance of success.

The severe forms of shock are usually present in patients who, regardless of the severity or nature of the initiating factors, have been allowed to go for a period of time without adequate treatment. As a typical finding, they may show considerable drop in the total amount of plasma proteins. These patients usually have also a conspicuous drop in the blood pressure and particularly in the pulse pressure, rapid thready pulse, severe reduction of the skin temperature, collapsed veins, slow flow of blood from wounds, thirst and low urinary output.* In these cases, maximum doses of plasma must be given (1,500 to 3,000 cc. of undiluted plasma and even larger doses). The first 250 to 500 cc. should be given at once and rapidly. Difficulty may be experienced in finding a suitable vein under these extreme conditions. To await a fall in the blood pressure before making a diagnosis of shock is reprehensible, but in the treatment of shock the blood pressure is a very good index by which to judge the efficiency and adequacy of treatment in general and the dosage of plasma in particular.

Shock due to burns: Patients with burns require very large amounts of plasma and must be watched carefully for the first 48 hours if shock is to be avoided. A good general rule is that 1,000 cc. of whole (undiluted) plasma for every 10 per cent of body surface burned is required during the first 24 hours. Almost as much may be needed on the

*Hemoconcentration may be present in severely dehydrated patients and in patients with severe burns or crush and abdominal injuries. Hemodilution is usually present in hemorrhage and skeletal trauma (which implies hemorrhage).

second day. The use of large quantities of plasma (2,000 cc. or more within 24 hours) may at times result in the development of pulmonary edema, particularly after the inhalation of fumes or in the presence of chest injury. It is often advisable to supplement plasma therapy with whole blood transfusions even in the first 48 hours to avoid subsequent anemia. After the first two days of treatment, whole blood is always preferable to plasma.

CAUTION IN THE USE OF LARGE DOSES OF PLASMA

In the treatment of patients showing evidence of impairment or renal function the presence of a mercurial preservative in plasma should be borne in mind, since it may conceivably add to renal damage if more than 2,000 to 3,000 cc. of plasma are administered in the course of 24 hours. Ordinarily the rate of administration of plasma should not exceed 150 to 300 drops (10 to 20 cc.) per minute. In advanced shock, where time is at a premium, it should be given as rapidly as possible—even to the extent of using two intravenous routes at the same time—until improvement is evident.

This material was prepared by the Committee on Blood and Blood Derivatives of the Advisory Board on Health Services of the American Red Cross. The Committee consists of: Doctors Charles A. Janeway, Chairman, Alfred Blalock, Edwin J. Cohn, Elmer L. DeGowin, Charles A. Doan, Robert F. Loeb, and Dr. John B. Alsever, Director of Blood Donor Service, American Red Cross.

The Virginia State Department of Health has completed the distribution of the initial supply of the dried blood plasma to all hospitals and physicians in this State. Requests for replacement of plasma may be made directly to the Department at Richmond, Virginia. It is estimated that the reserve supply now on hand will be sufficient to meet the needs during the next two years.

INDICATIONS FOR TRANSFUSION*

Indication	Whole blood		Plasma or serum	
	Choice	State (fresh or preserved)	Choice	State (fresh liquid, stored liquid, frozen, dried)
Shock due to hemorrhage (traumatic shock)	First[1]	No preference	Second	No preference
Shock with hemoconcentration—Initial treatment (burns, crush syndrome, and abdominal injuries)	Second	No preference	First	No preference
Hypoproteinemia	Second	No preference	First	No preference
Acute and chronic anemias	Imperative	No preference	Not indicated	
CO poisoning and methemoglobinemia	Imperative	No preference	Not indicated	
Immune therapy	Second	No preference	First	Fresh liquid, frozen, or dried
Deficiency of complement	Either	Fresh	Either	Fresh liquid, frozen, or dried
Deficiency of prothrombin	Either	Fresh	Either	Fresh liquid, frozen, or dried
Leukopenia and thrombocytopenia	Imperative	Fresh	Not indicated	
Hemophilia	First	Fresh	Second	Fresh liquid, frozen, or dried

1. The recommendation of first and second choice is made on the assumption that both blood and plasma are immediately available.

*Table adapted from OCD Technical Manual, "The Operation of a Hospital Transfusion Service".

THE RH FACTOR

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

The Rh factor gets its name from *Rh*esus, rhesus monkey. The red cells of the monkey carry a factor that 85 per cent of humans possess. Those whose red cells carry this factor are called Rh positive; those who do not, Rh negative. While the red cells carry the Rh factor, the plasma carries another set of factors capable of agglutinating the red cells of the donor who is Rh positive.

There are four major blood groups: AB, A, B, and O which correspond to the Moss classification: Groups I, II, III and IV. Factors contained in these groups are responsible for the ordinary transfusion reaction of incompatible blood. Other reactions may be due to other factors such as the Rh factor. Of the random white population 85 per cent are Rh positive; 15 per cent Rh negative.

Under two conditions plasma will develop a factor or factors capable of agglutinating the red cells of an Rh positive donor:

1. Following repeated transfusions of blood from Rh positive donors into Rh negative recipients. In spite of careful typing and cross matching for the four main blood groups, serious reactions may occur if Rh compatibility is not checked, particularly when a transfusion is given after the lapse of several weeks following the last of a series of transfusions. If the patient is Rh negative and receives Rh positive blood, the factor capable of agglutinating the red cells is formed in the plasma. If the patient is again given Rh positive blood, that factor already developed in the recipients plasma will agglutinate the donors red cells.

2. In some pregnancies, when the mother is Rh negative and the father is Rh positive, the fetus will inherit the Rh factor in proportion determined by whether the father is homozygous or heterozygous. During pregnancy when the mother is Rh negative and the fetus Rh positive, occasionally the Rh factor enters the maternal circulation by a mechanism as yet not fully understood. Repeated circulatory accidents in the placental barrier is a reasonable explanation. In response to this factor, the maternal tissues elaborate a factor carried in the plasma which has the capacity both to agglutinate and hemolyze. This factor is fluid and not cellular and is, therefore, resorbed through the placental barrier to enter the fetal circulation and exerts its specific destructive action against the fetal red blood cells.

In the ensuing struggle the fetus may die in utero, it may be born without any visible changes and die later, or it may be born with the usual manifestations of erythroblastosis, i.e., icterus or hydrops. In the babies born alive, there is frequently found a large percentage of immature red cells in the blood smears taken from cord blood or from smears made soon after birth. After a varying period of time, from several hours to a few days, a severe anemia may become evident. Many of these infants, alive at birth, may be saved by prompt and repeated small transfusions. Of necessity, these transfusions should be from normal Rh negative donors. The frequency of the transfusions will vary with the severity of the blood destruction as evidenced by the anemia. They should be continued until there is no further evidence of blood destruction, which may be from two to six weeks.

A paper giving a more complete discussion of the Rh factor will be forwarded on request by writing: Committee on Maternal Health, Medical Society of Virginia, 1200 East Clay Street, Richmond 19, Virginia.

PUBLIC HEALTH

I. C. RIGGIN, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for March, 1946, as compared with the same month in 1945, and for the period of January through March, 1946, compared with the same period in 1945, follows:

	Mar. 1946	Mar. 1945	Jan.-Mar. 1946	Jan.-Mar. 1945
Typhoid and Paratyphoid Fever	8	3	19	12
Diarrhea and Dysentery	187	419	408	812
Measles	2,900	380	4,393	630
Scarlet Fever	579	734	1,107	1,647
Diphtheria	38	18	141	80
Poliomyelitis	6	3	7	11
Meningitis	33	41	93	97
Undulant Fever	3	0	10	3
Rocky Mountain Spotted Fever	0	0	0	1
Tularemia	2	2	23	12

VITAL STATISTICS IN THE STATE IN 1945

During 1945, a year comprising somewhat over eight months of wartime and three months of peacetime and reconversion, vital statistics showed the same trends for Virginia as in the three preceding war years.

Births maintained a high wartime rate, although the rate of 22.8 per 1,000 population in 1945 was lower than the other war years. An increase of 8 per cent is seen, however, over the rate for the last prewar year, 1941. According to preliminary figures, there were 64,000 births recorded in the State in 1945, of which 47,424 were white and 16,576 were colored.

Deaths from all causes in Virginia in 1945 totaled 28,400 with a rate of 10.1 per 1,000 population. There were 19,284 white deaths with a rate of 9.0, and 9,116 colored, with a rate of 13.4. This represents a continuation of a steady downward death trend, with a decline of 145 deaths over the previous year.

Infant and maternal mortality both established new low records in 1945. According to preliminary figures, there were 3,100 deaths of infants under one year, with a rate of 48.3 per 1,000 live births. Deaths from puerperal causes numbered 138 (rate 2.2) in comparison with 182 maternal deaths (rate 2.8) for the preceding year.

A decline in mortality in 1945 over the previous year was noted for six of the communicable diseases as follows: Epidemic meningitis from 87 deaths in 1944 to 53 in 1945; whooping cough from 102 to 72; measles from 52 to 3 (the lowest on record); poliomyelitis from 59 to 20; influenza from 531 to 330; and pneumonia from 1,411 to 1,349. The six epidemic diseases showing increases over the preceding year were: typhoid fever from 11 deaths in 1944 to 18 last year; scarlet fever from 8 to 12; Rocky Mountain spotted fever from 12 to 20; diarrhea-dysentery from 430 to 504; and tuberculosis (all forms) from 1,287 to 1,309. The largest increase occurred in deaths from diphtheria, from 23 in 1944 to 44 last year.

Deaths from motor-vehicle accidents rose from 588 in 1944 to 679 in 1945. Other accidental deaths, however, showed a decline from 1,561 to 1,439 last year.

According to preliminary figures, there were 34,200 marriages in the State in 1945, which represents a considerable increase over the past two years, although the number did not reach the wartime peak of 40,443 in 1942.

The number of divorces during the past decade has increased steadily and rapidly, with a maximum record of 7,002 decrees granted in the State in 1945. In addition to these, there were 202 annulments of marriage.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

*President*_____Mrs. P. M. Chichester, Abingdon
*President-Elect*_____Mrs. J. E. Hamner, Petersburg
*Recording Secretary*__Mrs. Nathan Schuman, Alexandria
*Corresponding Secretary*__Mrs. L. C. Brawner, Richmond
*Treasurer*_____Mrs. Reuben F. Simms, Richmond

Sketch of the Leigh-Hodges-Wright Memorial Bed Fund.

In 1936 a resolution* was adopted by the Woman's Auxiliary to the Medical Society of Virginia to assume the expense of supporting an "Auxiliary Bed" in one of our state tuberculosis sanatoria, to be used by a physician, or some member of a doctor's family. The members of the Advisory Council were much interested in this project, and the matter was taken up with those in charge of the sanatoria at Blue Ridge and Catawba, who thought a real service could be rendered by such a plan.

During the first months after the adoption of this plan, the fund was used to assist the daughter of a retired physician, who was then a patient at Blue Ridge. After she had been discharged, we were asked by Dr. Brown to consider a young man who had to enter the sanatorium just one month before getting his degree in medicine at the University of Virginia. The Auxiliary found much real satisfaction and pleasure in being able to render assistance to this young man for several years, until he was able to leave the sanatorium.

In 1938 it was voted to adopt the name "Leigh-Hodges-Wright Memorial Bed", in honor of the memory of these three physicians who had all been members of the State Advisory Council.

At the present time, the fund is not being used, though it is available at any time there should be a call for it. Last year we were advised by our Advisory Council to hold the fund and make an effort to build it up, with the hope that it might some day become enough for an endowment.

It is a known fact that war always increases the spread of tuberculosis, and it is the hope of the committee that we will be prepared to meet an emergency at any time, should such occur.

Anne Seay Wright
(Mrs. Fletcher J. Wright) *Chairman,*
Leigh-Hodges-Wright Memorial Bed Fund.

Note—

Dear Co-Workers: Will you please clip and save this article for your files?

Sincerely,
Marie C. Chichester.

*Published in the Virginia Medical Monthly, May, 1944.

The Northampton-Accomac Auxiliary

Held its regular quarterly meeting at the home of Mrs. J. L. DeCormis at Accomac on April 9th.

A committee was appointed, with Mrs. W. J. Sturgis as chairman, and Mrs. J. L. DeCormis, Mrs. C. E. Critcher and Mrs. W. Carey Henderson, to meet with the doctors and hospital board with reference to the establishment of a memorial to the late Grace Wilkins Holland, now the major project of the Auxiliary.

Mrs. J. L. DeCormis presented the silver vase attendance trophy to the Auxiliary for the third time.

Mrs. W. Carey Henderson read Governor Tuck's proclamation on cancer control in Virginia, and stressed the saving of lives, the importance of yearly examinations, giving the signs and danger signals of cancer, and urged the support of the Virginia Cancer Foundation for clinics and research.

Mrs. Kellam Ames, chairman of public relations, spoke on juvenile delinquency, and urged the organizing of Girl Scout Troops to help overcome juvenile delinquency, stressing the need of trained councillors, as there are none on the Eastern Shore, and asked that the doctors' wives try to do something towards this need in their communities.

Mrs. J. Fred Edmonds, as chairman of the program committee, presented Mrs. W. L. Cosby, and her daughter, Mrs. Polk Kellam, who gave a delightful program of spring music, including violin selections from Grieg, Borowski, Lawrence Hope, and Fritz Kreisler. A social period with delightful refreshments followed.

An invitation was accepted by the Auxiliary from

Mrs. W. L. Cosby for an all day picnic at her cottage at Silver Beach on July 9th.

CATHERINE R. TROWER (MRS. HOLLAND),
Chairman, Press and Publicity.

Norfolk Auxiliary.

The Auxiliary to the Norfolk County Medical Society held its annual luncheon meeting, March 26th, at the Norfolk Yacht and Country Club.

A business meeting preceded the luncheon with Mrs. C. M. McCoy, president, presiding. Mrs. Southgate Leigh, Mrs. R. M. Reynolds and Mrs. W. E. Butler were appointed to the nominating committee, and Mrs. James W. Anderson, Mrs. Mallory Andrews and Mrs. Butler on a special committee to confer with representatives of the medical society on a suitable gift from the auxiliary to the society.

It was reported that approximately 100 names had been signed to a petition supporting a bill to be introduced in Congress to replace the Wagner-Murray-Dingell bill for federalized medicine.

Mrs. Peyton Chichester of Abingdon, president of the Auxiliary to the Medical Society of Virginia, was a guest at the meeting and spoke to members briefly on the social, philanthropic and legislative functions of the Auxiliary.

Dr. James V. Bickford, pediatrician and consultant in the adjustive services division of the city schools, was the guest speaker, his subject being "What is the School's Responsibility Towards the Pre-Delinquent Child?"

(MRS. M. F.) CLARA P. BROCK,
Chairman, Press and Publicity.

BOOK ANNOUNCEMENTS

Books received for review are promptly acknowledged in this column. In most cases reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Synopsis of Physiology. By ROLLAND J. MAIN, Ph.D., Professor of Physiology, Medical College of Virginia, Richmond. St. Louis. The C. V Mosby Company. 1946. 341 pages. Illustrated. Cloth. Price $3.50.

Modern Management in Clinical Medicine. By F. KENNETH ALBRECHT, M.D., S.A., Surgeon, U. S. Public Health Service; Kansas State Tuberculosis Consultant; Formerly Clinical Director, U. S. Marine Hospital, Baltimore, Md. Baltimore. The Williams & Wilkins Company. 1946. ix-1238 pages. Illustrated. Cloth. Price $10.00.

The Osseous System. A Handbook of Roentgen Diagnosis. By VINCENT W. ARCHER, M.D., Professor of Roentgenology, University of Virginia, Department of Medicine. The Year Book Publishers, Inc., Chicago. 1945. 320 pages. Illustrated. Price $5.50.

This is short, concise book containing three hundred and eleven pages, with one hundred and forty-eight plates of excellent reproductions of radiographic films showing bone injuries and bone diseases. It is written for the neophyte in x-ray and does not attempt to give exhaustive detail concerning these two pathological conditions. The technic and discussion of good bone detail should be very valuable to the beginner.

It discusses and illustrates the difference between the normal findings and the abnormal, and tells how to avoid mistaking the normal for the abnormal findings. It also tells how to demonstrate a fracture by x-raying bones at different angle modifications from the conventional positions.

On his discussion of the spine, Dr. Archer considers injuries and anomalies. The division of each section is rather unique in that he classifies the disease according to the radiological findings. For instance, the spine is divided into those diseases which cause vertebral compression without joint involvement; those with new bone formation and no destruction.

The section on Bone Diseases and Abnormalities is classified according to those conditions exhibiting periosteal thickening, the anemias, developmental defects, aseptic necrosis, and ends of long bones as well as bone texture.

The last section describes bone diseases occurring in adult life. Classification here is made in the same way as in the previous section, such as, diseases causing periosteal thickening, increase in bone density, etc.

There is an excellent bibliography at the end of each section for the benefit of him who desires to go into more detail. Altogether, it is a good book for "the occasional radiographer" to own; and it is invaluable as a quick reference book for the experienced radiologist.

D. V. KECHELE, M.D.

One Hundred Years of Gynaecology. By JAMES V. RICCI, A.B., M.D., Clinical Professor of Gynaecology and Obstetrics, New York Medical College; Director of Gynaecology of the City Hospital and of Columbus Hospital, New York; Attending Gynaecologist and Obstetrician, Flower and Fifth-Avenue Hospitals; Consultant, Beekman and Downtown Hospitals; Fellow, New York Academy of Medicine, etc. The Blakiston Company, Philadelphia. 1945. 651 pages. Price $8.50.

This is a companion volume of *Genealogy of Gynaecology* (1943), which brought the history of Gynaecology up to 1800. Unfortunately for the pleasure of continuous reading, references are so numerous that at times one feels as though he were reading a page of the Index Catalogue. Apparently the author has not omitted a reference to a single gynaecological work. For instance, he gives credit to John B. Strachan of Virginia for the first successful excision of the cervix "in a scirrhous state" in 1829. The index of personal names in double columns occupies 69 pages. It is a book that every one interested in gynaecology will want to keep where he can refer to it frequently, for it gives quickly the historic background of any phase of gynaecology in which he may be interested.

M. P. R.

American Red Cross First Aid Textbook. Prepared by The American Red Cross for the Instruction of First Aid Classes. Revised. With 264 Illustrations. The Blakiston Company, Philadelphia. 1945. Pamphlet of ix-254 pages.

The doctor, first aid instructor, and general public will certainly welcome this new edition of American Red Cross First Aid textbook, the first since 1937. The doctor will be glad to note that truly outstanding authorities in their fields have had a part in this manual.

It is interesting to see that recent changes in principles of treatment are incorporated in this edition.

The 246 pages are divided into 12 chapters, 9 of which deal with practical treatment of injuries. The other 3 chapters are devoted to the why of first aid, elementary anatomy, and list of contents of first aid. The illustrations are well done, the bold face type of essential principles is appropriate; the book is firmly bound and the printing excellent.

The younger doctor may find useful practical therapy which he may have missed in theoretical and clinical lectures. The book would serve as an excellent text for a short first aid course in medical school.

PAUL ROBINSON.

What People Are. A Study of Normal Young Men. By CLARK W. HEATH. In Collaboration with Lucien Brouha, Lewise W. Gregory, Carl C. Seltzer, Frederic L. Wells, and William L Woods. The Grant Study, Department of Hygiene, Harvard University. Harvard University Press, Cambridge, Mass. 1945. ix-141 pages. Price $2.00.

This book is an unusual medical volume in that it is about normal people, not a single part of it deals with the sick or abnormal. The author feels that knowledge of the normal is of great concern to medicine, education, business and government.

The authors have been engaged in cooperative study of normal people for a six-year period. The report concerns chiefly the study of selected Harvard undergraduates, also groups of men from the armed forces and in civilian life. The college students were selected as to good adjustment, good health and academic success.

They define the normal person as the individual with a balance of traits of many kinds that allows him to function effectively.

The approach is on a clinical basis. The characteristics of normal young men are described from the point of view of medicine, physiology, anthropology, mental measurement, socio-economics and psychiatry. Divergent personalities are based on variability of characteristics.

In section one the volume offers introductory divisions giving the needs for a study of normal individuals, the aims and purposes; the selection of participants with the methods of examining them.

In section two the book treats with description of normal young men from the point of view of different disciplines.

The personality summary is based on appearance, manner, expressive movements, speech, athletic activities, outdoor life, scholastic aptitude, social activities and personality structure. Tables are presented to explain the studies made.

The authors do not consider this a completed work. They wish many hands will attempt the same studies in different localities.

The volume was enjoyed. It offers a new approach in the study of personalities which deviates from the psycho-biological viewpoint. I recommend it to be read by students, nurses, psychologists and physicians.

VINCENT EDWARD LASCARA, M.D.

Editorial

Change in Management at McGuire General Hospital

ON April first the Army turned over the McGuire General Hospital to the Veterans' Administration. At the exercises marking the occasion General Hawley made the significant statement that if the resident staff did not make their specialty boards it would be the fault of the visiting staff: either the visiting staff did not give the resident staff proper instruction or the resident staff was incompetent. In the latter case the visiting staff should have reported the incompetency so that the incompetent member or members could have been removed. Such a dictum speaks well for the hospital. A hospital whose residents must make their respective boards is a hospital with a wide awake and interested staff; and a hospital whose visiting staff has the responsibility of seeing that the residents become qualified specialists is a hospital whose patients will have the best possible care.

Col. P. E. Duggins has been commanding officer at the McGuire General Hospital since it was opened in June 1944. Among his good qualities is a well developed appreciation of good public relations. As the result of Col. Duggins' wisdom, the community has thought well of the hospital from the very beginning. The medical personnel attended the meetings of the Academy of Medicine and the Academy members attended special meetings in the McGuire Hospital. We still remember with pleasure the program of the Academy of Medicine on November 14, 1944, that was put on by Col. Duggins, Lt. James H. Semans, Major D. S. Pepper and Capt. William H. Jeffers.

There was always a friendly relation between the two groups. We will miss Col. Duggins and his staff and we wish them Godspeed. It is to be hoped that the new staff will be as friendly as the old one. The MONTHLY promises its best endeavors to make the new doctors at the McGuire Hospital feel at home in Richmond.

Bernard Shaw and Medicine

ON another page is published a communication from Dr. Guy Hinsdale who takes exception to Shaw's silly tirade against Lord Lister. The occasion of the Shavian eruption was the appearance of a very excellent history of medicine by Dr. Douglas Guthrie. Dr. Guthrie's book first appeared in September 1945 and already has had a second printing. In it he traces the progress of medicine from Imhotep to Sir William Osler. There is an excellent chapter on the Lister place in surgery. Before Lister there was no surgery as we know it today, because wounds rarely healed except with "laudable pus" and patients died of sepsis. Impressed with Pasteur's demonstration that putrefaction and fermentation were identical processes and the result of bacterial growth, Lister proceeded to eliminate bacteria from all wounds. The idea was so new that he had no precedents to go by; consequently he had to do a lot of experimenting. The important thing was that he proved his point and made surgery safe. That he used carbolic acid is a mere detail and Shaw blunders as usual when he overlooks the fundamental truth to take a crack at carbolic acid. Our Irish Wit makes the astounding statement that Sir Almroth Wright gave the *coup de grace* to "antiseptic carbolic surgery" by proving that the best wound dressing was a 10 per cent salt solution in pipe water, a discovery he made by analyzing the soap and sugar poultices used for wounds by the peasant women of Ireland.

One of Shaw's pet delusions is that vaccination does not protect against smallpox. Another delusion is that pathogenic microbes are products of the zymotic diseases; that these diseases are products of ugliness, dirt and stink, offending every aesthetic instinct

All this makes good profitable writing for Mr. Shaw but it would be a poor guide for public health officials. Another great Irishman has said "There is none so blind as they that won't see", which is the most charitable explanation of Mr. Shaw's writings upon medical subjects.

The provocative Mr. Shaw perverted us from what we started out to say, which is, that it is incredible that some of us now living could have seen and taken part in the beginnings of modern surgery—could have actually used the sea sponges of the pre-Listerian era and the large steam atomizers that Lister introduced.

Legislative Trends in Washington

AMONG the new bills introduced in Congress with medical implications are the following:

S. 1850 by Mr. Kilgore of West Virginia. A Bill to promote the progress of science and the useful arts, to secure the national defense, to advance the national health and welfare, and for other purposes. This bill was drafted by the War Mobilization subcommittee of the Senate Military Affairs Committee, after holding hearings in joint session with a Commerce subcommittee on S. 1285 and S. 1297 and S. 1720.

S. 1865 by Mr. Radcliffe of Maryland. A Bill directing the Secretary of Commerce, through the Bureau of the Census, to make a survey of physically handicapped citizens.

S. 1875 by Mr. Pepper of Florida. A Bill to authorize and request the President to undertake to mobilize at some convenient place in the United States an adequate number of the world's outstanding experts, and coordinate and utilize their services in a supreme endeavor to discover means of curing and preventing cancer. The bill would authorize $100,000,000 for cancer research.

S. 1883 by Mr. Langer of North Dakota. A Bill authorizing the appropriation of $3,750,000,000 for use in making studies relating to the prevention, diagnosis, and treatment of cancer.

S. 1891 by Mr. Langer of North Dakota. A Bill to protect the public health through the detection of certain diseases, and for other purposes. The Surgeon General is authorized to provide means for securing a specimen of urine of each person of the United States and providing for its examination and analysis. A report of the findings is to be made to the person furnishing the specimen and detection of the presence of disease is to be reported to health authorities of the community. Specimens are not to be collected "more often than once every six months".

H. R. 5572 by Mr. Lemke of North Dakota. A Bill to prohibit experiments upon living dogs in the District of Columbia and providing a penalty for violation thereof. Differs from H. R. 491 in excepting "operations normally performed for the convenience of the owner and welfare" of the dog.

H. R. 5685 by Mr. Rogers of New York. A Bill to provide for the national health and productive power of the people of the United States by clarifying the laws pertaining to hospital treatment, medical care, domiciliary care, and related services, and for other purposes. Provides for additional immediate construction of hospitals of bed capacity of 57,000. Also the building of the necessary associated branches of medical services to make the Veterans' Administration a complete medical center within itself which will have its own research laboratories, medical flying corps for quick transportation of serums, equipment, and patients from one specialty to another. It will also provide the Veterans' Administration with fact-finding proving centers to determine the merits of healing arts which heretofore have not been considered.

H. R. 5628 by Mr. Priest of Tennessee, February 28. A Bill to amend the Public Health Service Act to authorize grants to the States for surveying their hospitals and public health centers and for planning construction of additional facilities, and to authorize grants to assist in such construction. Referred to the Committee on Interstate and Foreign Commerce. This is the latest hospital construction bill, the others being H. R. 2498, H. R. 3561, H. R. 2755, H. R. 3845 and S. 191. H. R. 5628 is S. 191 with the amendments incorporated which were offered by Senator Murray but rejected when S. 191 was passed by the Senate.

S. 1888 by Mr. Langer of North Dakota. A Bill to authorize the appropriation of $3,750,000,000 for use in combating infantile paralysis. The bill states, in part, "The funds authorized to be appropriated—shall be disbursed by the Secretary of the Treasury upon vouchers approved by Sister Kenny".

A State-Wide Survey of Pediatric Needs and Facilities Conducted by Doctors Themselves

Attention is directed to a communication in "The Forum", describing a survey that the Virginia Pediatric Society is undertaking. It is a part of a nation-wide program that was initiated by The American Pediatric Society and is sponsored by the American Academy of Pediatrics. The Virginia survey has the approval of Dr. J. L. Rawls, President of the Medical Society of Virginia. Give Mr. Burnette the glad hand when he comes around.

Societies

Alexandria Medical Society.

At the regular meeting of this Society on April the 11th, the following were elected officers for the coming year: President, Dr. James A. Gooch; vice-president, Dr. C. E. Arnette; and secretary-treasurer, Dr. R. F. Benthall. All are of Alexandria.

Plans were made for the annual banquet which will be held at the George Mason Hotel in that city on May the 18th, at which time the new officers will be installed.

Buchanan-Dickenson County Medical Society.

Officers for the year elected at its annual meeting are: President, Dr. C. H. Reagan, Grundy; vice-president, Dr. Thornton Kell, Grundy; and secretary-treasurer, Dr. T. C. Sutherland, Haysi. This society meets every 3rd Wednesday night at the Grundy Hospital, and has an average attendance of about fifteen members. At recent meetings interesting war experiences have been reported by Drs. James P. Williams, Richlands; J. S. Richardson, Grundy; F. H. Holt, Grundy; Joshua P. Sutherland, Harman; and W. B. Trivett, Big Rock.

The town of Grundy recently voted for a modern water system which was carried almost unanimously and was endorsed by the Buchanan-Dickenson Society.

Lynchburg Academy of Medicine.

At the March 4th meeting of the Academy, Dr. George Cooper, Associate Professor of Roentgenology at the University of Virginia, was the guest speaker, his subject being "Cancer in General Practice". After his interesting paper, Mrs. Augusta Firth Jarman, Executive Secretary of the Virginia Cancer Foundation, outlined the procedures to be followed for certification of indigent cancer patients. Announcement was made of the opening of the Lynchburg Tumor Clinic, approved by and affiliated with the Foundation. Meetings will be held on Tuesdays at 2:00 o'clock at the Lynchburg General Hospital for diagnostic and follow-up studies.

Present officers of the Academy are: President,

Dr. E. A. Harper and secretary, Dr. H. W. Hollingsworth. Reported by

JOSEPH W. HOUCK.

The Patrick-Henry Medical Society

Held its regular quarterly meeting in Martinsville on April 12th. The meeting was called to order by Dr. T. H. Dickerson, President, and the following program was presented: Dr. W. A. Porter, Councilor of the Fifth District, gave an interesting report of the activities of the Medical Society of Virginia and the efforts being made to counteract the possibility of "state medicine"; Dr. B. A. Hopkins gave an interesting paper on "The General Practitioner and Rural Medical Care", bringing out many of the problems confronting the rural general practitioner and suggested methods to improve rural medical care; Dr. J. T. Shelburne gave a report on the Tri-State Medical Society meeting held in Richmond in February. Drs. C. J. Axelson, M. C. Rowe, and J. W. Clark, all of Martinsville, were elected to membership. Dr. W. N. Thompson, Stuart, is secretary of this Society.

The Medical Society of Northern Virginia

Held its regular meeting at Mimslyn Hotel in Luray on April the 9th, at which time the following program was presented:

Office Gynecology—Dr. Pembroke T. Grove, Winchester.

Encephalo-Myelitis—Dr. William E. Lynn, Front Royal.

General Surgery in Navy as Contrasted to Civilian Life—Dr. James A. Miller, Winchester.

The Anemias—Dr. Byrd Leavell (Guest), University of Virginia.

Luncheon followed the meeting.

This Society holds three meetings a year—April, August and December. Officers at this time are: President, Dr. G. G. Crawford, Strasburg; vice-president, Dr. D. M. Kipps, Front Royal; secretary-treasurer, Dr. H. I. Pifer, Winchester.

Roanoke Academy of Medicine.

At the regular meeting of the Academy on April 1st, the following program was presented: "War Medicine and Its Transition to Post-War Conditions" by Rear Admiral Ross T. McIntire, Surgeon General, U. S. Navy, and Director of the Bureau of Medicine and Surgery; and "The Story of Streptomycin" by Dr. Selman A. Waksman, New Brunswick, N. J. These speakers were guests of the Gill Memorial Hospital Post-Graduate Course.

The Southwestern Virginia Medical Society

Held its annual spring meeting on May 3rd in Wytheville under the presidency of Dr. A. P. Jones, Roanoke. The following program was presented at the afternoon session: Gun Shot Wounds of the Pregnant Uterus by Dr. Walter A. Porter, Hillsville; Recent Advances in Intracapsular Cataract Surgery by Dr. E. G. Gill, Roanoke; Perforating Peptic Ulcer by Dr. Harry M. Hayter, Abingdon; and Coronary Insufficiency by Dr. J. E. Gardner, Roanoke. The banquet was held at 6:30 after which the following guests were presented: Dr. Edward M. Hanrahan, Baltimore, who spoke on Some of the Typical Procedures in Plastic Surgery; and Dr. J. M. T. Finney, Jr., also of Baltimore, his subject being Gall-Bladder Disease with Special Reference to Cancer of the Gall-Bladder.

Dr. A. F. Giesen, Radford, is secretary-treasurer of this Society.

Norfolk County Medical Society.

Recent programs of this Society have included the following speakers:

Dr. Thomas N. Spessard, Norfolk, on March 25—A Brief Appraisal of Modern Psychiatric Therapy;

Dr. F. D. Costenbader, Washington, D. C., on April 8—Aids in the Ophthalmic Examination of Children;

Dr. Walter B. Martin, Norfolk, on April 22—Malaria.

Dr. Foy Vann and Dr. Lockburn B. Scott are president and secretary, respectively.

The Virginia Peninsula Academy of Medicine,

At its regular meeting on April the 15th, was addressed by Dr. Cless Y. Fordyce of Baltimore, his subject being "Choice of Anesthetic and Avoidance of Complications". Dr. Harvey G. Bland of Newport News presided at the meeting which had an attendance of sixty-three. Dr. C. D. Bradley, also of Newport News, is secretary-treasurer, and Dr. Russell Buxton vice-president.

Hopewell (Va.) Medical Society.

This Society at its annual meeting elected Dr. F. M. Howell as president, and Dr. J. S. Williams as secretary.

News

The 1946 Meeting, Medical Society of Virginia,

Is to be held at the Cavalier Hotel, Virginia Beach, October 14, 15 and 16, under the presidency of Dr. Julian L. Rawls of Norfolk. The Norfolk and Princess Anne County Societies will be hosts for this occasion and the following Committee of Arrangements has been named: Dr. A. B. Hodges, chairman, and Drs. N. F. Rodman, C. C. Smith and C. M. McCoy from the Norfolk Society, and Drs. Ira Hancock, H. F. Dormire and C. Z. Corpening from the Princess Anne.

The management of the Cavalier will handle all reservations and suggests that these be made promptly on account of their limited capacity. They have given a rate of $20.00 daily, two persons in twin bedded room, and $12.00 daily for single room, both with private baths. These are on American plan and include, in addition to meals, swimming in the indoor pool, tennis, and banquet to those registered in the hotel, without extra charge. Two 18-hole golf courses at the Princess Anne Country Club and the Cavalier Country Club are at the disposal of those registered at the Cavalier. There are several other hotels, open the year round, and reservations will be made in these when the Cavalier is full. As convention hotels and those wishing to stay at headquarters have been greatly inconvenienced by last-minute cancellations, the Cavalier management feels it should have payment for one day with request for reservation, or at least 48 hours notice of cancellation by wire or phone, in order that they may accommodate others who may wish to attend. Please bear this in mind in making reservations.

Owing to the limited time for scientific work, it has been suggested that golf and tennis tournaments be held on Sunday preceding the meeting, if sufficient interest is manifested to arrange for these. It is therefore suggested that those interested advise the Society's office promptly, that arrangements may be made if it is deemed feasible.

University of Virginia.

The Commencement exercises of the School of Medicine of the University of Virginia were held on March 20th. The address was delivered by Rear Admiral Kent C. Melhorn, Medical Corps, United States Navy, and diplomas were presented by President John Lloyd Newcomb. The sixty-five graduates, with hospital appointments, are as follows:

UNIVERSITY OF VIRGINIA HOSPITAL, Charlottesville —Drs. Frank Kimball Abbot, Quincy, Ill.; Harry Duffield Cox, Portsmouth; Arthur Ebbert, Jr., Wheeling, W. Va.; Jack Warren Hollowell, Portsmouth; Morris Arthur Lambdin, Rocky Mount; Walter Copley McLean, South Hill; Charles Wesley Merritt, Boyle, Miss.; Herbert Nicholas Munhall, Jr., Alexandria; Philip Foster Murray, Fairfax; Milton Lewis Rosenberg, Morristown, N. J.; and Russell Arthur Salton, Williamson, W. Va.

BLUE RIDGE SANATORIUM, Charlottesville—Dr. Harry Jackson Hyer, Sutton, W. Va.

MEDICAL COLLEGE OF VIRGINIA, Richmond—Dr. James Bryon Hutcheson, III, Roanoke.

PORTSMOUTH NAVAL HOSPITAL, Portsmouth—Dr. Thomas Hancock Garth, Charlottesville.

PHILADELPHIA GENERAL HOSPITAL, Philadelphia, Pa.—Drs. Leon Ashby Adams, Warrenton, N. C.; and Lane Ameen, Hopewell.

PHILADELPHIA NAVAL HOSPITAL, Philadelphia, Pa. —Dr. Sam Dixon Graham, Charlottesville.

MONTGOMERY HOSPITAL, Norristown, Pa.—Dr. Charles Wenger Hertzler, Denbigh.

ST. LUKE'S HOSPITAL, Bethlehem, Pa.—Dr. Dennis Parfrement McCarty, Delaplane.

STRONG MEMORIAL HOSPITAL, Rochester, N. Y.— Dr. Frank McFaden Blanton, Richmond.

LONG ISLAND COLLEGE HOSPITAL, New York—Dr. Robert Barrett, Gahagan, Jackson Heights, N. Y.

PUBLIC HEALTH SERVICE, Staten Island, N. Y.— Dr. Wayland Jackson Hayes, Jr., Nashville, Tenn.

KING'S COUNTY HOSPITAL, Brooklyn, N. Y.—Drs. Bernard Herman Kasinoff, Brooklyn, N. Y.; Howard Israel Kruger, Norfolk; and Morton Charles Wilson, Brighton, Mass.

BETH ISRAEL HOSPITAL, New York, N. Y.—Dr. Charles Kessler, Malden, Mass.

PRESBYTERIAN HOSPITAL, New York, N. Y.—Dr. William Whitehurst Old, III, Norfolk.

NEW YORK HOSPITAL, New York, N. Y.—Dr. Samuel Randolph Penn, Roanoke.

LENOX HILL HOSPITAL, New York, N. Y.—Dr. Lula Johnson Power, Abbeville, S. C.

ST. LUKE'S HOSPITAL, New York, N. Y.—Dr. Robert Legare Reeves, Madison, N. J.

KNICKERBOCKER HOSPITAL, New York, N. Y.—Dr. Benito Benjamin Rish, Mexico City, Mex.

GRASSLANDS HOSPITAL, Valhalla, N. Y.—Dr. Raymond Herbert Stokes, Waynesboro.

HERMANN HOSPITAL, Houston, Tex.—Dr. Thomas Alred Anderson, Houston, Tex.

SINAI HOSPITAL, Baltimore, Md.—Drs. Royce Lee Brown, Norfolk; and Leon Moses Kruger, Norfolk.

ST. JOSEPH'S HOSPITAL, Baltimore, Md.—Dr. Gunyon Mitchell Harrison, Fredericksburg.

UNION MEMORIAL HOSPITAL, Baltimore, Md.—Drs. Jacquelin Marshall Harrison, Richmond; and Mark Edgar Holt, Jr., Petersburg.

ORANGE MEMORIAL HOSPITAL, Orange, N. J.—Dr. David Staats Burnet, Charlottesville.

MEDICAL CENTER, Jersey City, N. J.—Dr. Homer Rodeheaver Justis, Lynchburg.

HILLMAN-JEFFERSON HOSPITAL, Birmingham, Ala. Dr. James Joseph Bushnell, Childersburg, Ala.

NORWOOD GENERAL HOSPITAL, Birmingham, Ala. —Dr. Edmund Cape Payne, Jr., Newcastle, Ala.

TENNESSEE COAL AND IRON HOSPITAL, Birmingham, Ala.—Dr. John Alan Stough, Montgomery, Ala.

UNIVERSITY OF MINNESOTA HOSPITAL, Minneapolis, Minn.—Dr. Gilbert Sadler Campbell, Jr., Charlottesville.

BARONESS-ERLANGER HOSPITAL, Chattanooga, Tenn. —Drs. William Everett Carter, Alexandria; and Paul Shafer Stonesifer, Roanoke.

BAPTIST MEMORIAL HOSPITAL, Memphis, Tenn.—Dr. Walter Stevens Ridgway, II, Jackson, Miss.

MEMORIAL HOSPITAL, Worcester, Mass.—Dr. Geoffrey William Curwen, Monroe, Ohio.

CHILDREN'S HOSPITAL, Boston, Mass.—Dr. Malcolm Alexander Holliday, Charlottesville.

WORCESTER CITY HOSPITAL, Worcester, Mass.—Dr. Earl Tracy Owen, Lynchburg.

BOSTON CITY HOSPITAL, Boston, Mass.—Dr. Wesley Calhoun Palmes, Jr., Mobile, Ala.

BETH ISRAEL HOSPITAL, Boston, Mass.—Dr. Herbert Ralph Silverman, Danville.

LAKESIDE HOSPITAL, Cleveland, Ohio.—Dr. Walter Lee Evans, Jr., Lynchburg.

CINCINNATI GENERAL HOSPITAL, Cincinnati, Ohio —Dr. Ruth Wade Holmboe, Charlottesville.

MT. SINAI HOSPITAL, Cleveland, Ohio.—Dr. Joseph Hyman Marko, San Antonio, Tex.

UNIVERSITY OF IOWA HOSPITAL, Iowa City, Ia.—Dr. George Walter Hambrick, Jr., Princeton, W. Va.

MERCY HOSPITAL, Chicago, Ill.—Dr. Robert William Hartley, Clifton Forge.

EMERGENCY HOSPITAL, Washington, D. C.—Drs. Lewis Benton Newman, Arlington; and Robert Lee Price, Norfolk.

BOWMAN-GRAY HOSPITAL, Winston-Salem, N. C. —Dr. William Edmond Rabil, Weldon, N. C.

EMORY UNIVERSITY, Atlanta, Ga.—Dr. Emmett Francis Reese, Courtland.

QUEEN'S HOSPITAL, Honolulu, Hawaii—Dr. Oscar Andreas Thorup, Jr., New York, N. Y.

MONTREAL GENERAL HOSPITAL, Montreal, Can.—Dr. Paul Paine Webb, Newcastle.

VIRGINIA MASON HOSPITAL, Seattle, Wash.—Drs. Robert Bocock Wilkins, Lynchburg; and Charles William Wilson, Staunton.

Spring Clinic of the Norfolk County Medical Society.

The Spring Clinic which had been held annually in Norfolk before the war will be resumed at a one-day meeting to be held May 22, 1946. The morning session will be at the Norfolk General Hospital and the afternoon session at the De Paul Hospital. A luncheon will be served at the Norfolk General Hospital and a social hour followed by a dinner will be held after the afternoon session at the De Paul Hospital. This is primarily a clinical session and no formal papers will be presented. Dr. I. A. Bigger of the Medical College of Virginia will give a clinical program at the afternoon session.

All doctors in the Tidewater section of Virginia and North Carolina are invited to attend.

Dr. West Retires.

Dr. Olin West, perhaps the best known and one of the most popular doctors in this country, retired on April the 1st, after almost a quarter of a century with the American Medical Association. Dr. West may be assured of the good wishes of doctors through-

out this country and their commendation of his excellent work.

Dr. George F. Lull, formerly Deputy Surgeon General, U. S. Medical Corps, who has been serving as Dr. West's assistant since the first of the year, has succeeded him as secretary and general manager of the Association.

Married.

Dr. John Richard Saunders, Jr., Lynchburg, and Miss Caroline Virginia Doyle, McKenney, March 30th. He is a graduate of the Medical College of Virginia in 1935, and, having recently completed some graduate study at the College, has returned to Lynchburg.

Dr. Samuel Henley Carter, Jr., The Plains, and Miss Katherine Kivlighan, Staunton, March 30th. He is a graduate in medicine from the University of Virginia, class of 1945.

Dr. Sam Dixon Graham and Miss Jane Warwick O'Neill, both of Charlottesville, March 28th. He is a 1946 graduate in the medical school of the University of Virginia.

Dr. A. B. Gravatt, Jr.,

Kilmarnock, has been appointed Lancaster County Coroner to succeed the late Dr. M. C. Oldham.

State Department of Health Personnel Changes.

Dr. B. R. Allen, recently released from the Army, was appointed Director of the Bureau of Communicable Diseases as of April 1st.

Dr. E. C. Harper, Director of Tuberculosis Out-Patient Service and the Crippled Children's Bureau, resigned as of May 1st to become Assistant Chief, Tuberculosis Control Program, 4th District, Veterans Administration.

Dr. C. E. Waller, Health Officer of Loudoun County, and Dr. Nelson Podolnick, Health Officer of Fairfax-Prince William-Stafford Health District, resigned as of April 1st.

Dr. S. D. Gardner, assistant director of rural health, has resigned, effective May 15th, and will enter private practice in San Antonio, Texas.

Dr. J. Belmont Woodson, superintendent and medical director of Piedmont Sanatorium, has resigned after fifteen years of directing that institution.

News from the University of Virginia.

At the meeting of the University of Virginia Medical Society on Monday, March 4, Dr. Marius Nygaard Smith-Petersen of Harvard University spoke on the subject, "Arthroplasty of the Hip with Vitallium Mold".

Graduation exercises for a class of sixty-five were held on March 20. The address to the graduates was delivered by Rear Admiral Kent C. Melhorn. In connection with the graduation exercises there were delivered thirty-nine commissions in the Army of the United States and twenty commissions in the U. S. Naval Reserve.

Dr. Oscar Swineford, Jr., Professor of Practice of Medicine, was a member of the faculty of the postgraduate course in Allergy held in New Orleans, March 8-12 under the sponsorship of the Department of Medicine, Louisiana State University and of the American Academy of Allergy. His subjects were "Physical Allergy", "Neurologic Allergy", and "Contact Dermatitis".

Dr. Swineford also read a paper at the meeting of the Southeastern Allergy Association in Atlanta, March 30, on the subject of "Contact Dermatitis".

On April 19, Dr. Eugene M. Landis, Professor of Physiology in the School of Medicine of Harvard University, gave the annual Alpha Omega Alpha address. He spoke on "Venous Pressure and Cardiac Failure in the Laboratory and Clinic".

McGuire General Hospital Transferred to Virginia.

On Sunday, March 31st, ceremonies were held for the transfer of this Hospital from the Army to the Veterans Administration. Major-General Paul R. Hawley, chief medical director of the VA was the principal speaker. He was in charge of all Army medical activities in the European theatre during World War II and recently went on inactive duty. Brigadier-General G. W. Rice, chief surgeon, Third Service Command, Baltimore, also spoke and read the formal order inactivating McGuire as an Army institution. Speaking on behalf of the 200 soldier patients in the hospital was First Sergeant Henry I. Hickman, Jr., of Lexington, who has been a patient at the hospital since June 1945. There was also a concert by the famous Quantico Marine Band.

Approximately 200 patients remained in the hospital, but it is being set up under VA as a 1,000 bed institution and patients are expected to begin coming in soon at a rapid rate.

Dr. Edmund Ellerson will be manager of the hospital and the following have been selected from the staff of the Medical College of Virginia for positions on the staff: Drs. James P. Baker and Charles Caravati as medical consultants: Drs. A. Stephens Graham, Guy W. Horsley, and Harry J. Warthen as surgical consultants; Drs. Frank P. Coleman, Patrick H. Drewey, Jr., Marshall P. Gordon, Jr., William R. Hill, William A. Johns, John R. Massie, Jr., Sidney G. Page, Allen W. Pepple, E. W. Perkins, W. Morris Pinckney, Reno R. Porter, Benjamin W. Rawles, Jr., Wellford C. Reed, Edwin M. Rucker, R. C. Siersema, W. Taliaferro Thompson, Jr., Elam C. Toone, Jr., Charles E. Troland, Gilman R. Tyler and T. Duval Watts as attending physicians.

American Medical Association.

Official call has been issued for the 95th annual session of the Association to be held in San Francisco, from Monday, July 1st to Friday, the 5th. The House of Delegates will convene on Monday, and the Scientific Assembly will open with the General Meeting on Tuesday evening, at 8:00 P. M. The various sections will start their sessions on Wednesday morning.

For those interested in a sight-seeing trip in the far west, the Oklahoma State Medical Association is sponsoring an *all-expense* tour, with the exception of meals. The meeting point will be Kansas City and the time will be sixteen days, including travel time from Chicago through Kansas City and Grand Canyon and return. This will allow five days in San Francisco, a tour through the Northwest, returning through Yellowstone National Park. Detailed information may be secured from Mr. Harry E. Kornbaum, Rainbow Travel Service, Inc., First National Building, Box 652, Oklahoma City, Okla. As the party is to be limited to 200 because of hotel space and Pullman car shortage, those interested should get in touch with Mr. Kornbaum at once.

Dr. Thomas N. Spessard,

Recently released from Service, has opened his office at 712 Botetourt Street, Norfolk, to continue the practice of psychiatry and neurology.

The Spring Travel Clinic

Of the Virginia Obstetrical and Gynecological Society was held at Philadelphia March 25th and 26th. Clinics were visited at The University of Pennsylvania, Philadelphia Lying-In and Jefferson Hospitals.

Those in attendance were Doctors Harrison Picot, Alexandria; T. J. Williams, Charlottesville; S. E. Oglesby, Lynchburg; W. R. Payne, H. G. Bland, Newport News; R. B. Nicholls, P. E. Thornhill, R. S. Kight, M. B. Savage, Norfolk; H. C. Spalding, H. H. Ware, Jr., Edwin Rucker, A. L. Carson, Jr., Spotswood Robins, L. L. Shamburger, Richmond; George S. Hurt, John O. Boyd, Rees Morgan, Roanoke. Guests, Doctors W. N. Thornton, Jr., Charlottesville, and J. C. Parker, Richmond.

Dr. Grant R. Elliott,

Who recently returned to Orange after several years' service in the Army, has given up his work there and accepted a position on the staff of McGuire General (Veterans Administration) Hospital in Richmond.

Jefferson Medical College.

Commencement exercises were held at the Academy of Music in Philadelphia, on Wednesday, March 27, at twelve o'clock. The Degree of Doctor of Medicine was conferred upon 155 men coming from 22 states. The commencement address was delivered by Brooke M. Anspach, M.D., Emeritus Professor of Gynecology, Jefferson Medical College, on "Life, Liberty and the Pursuit of Happiness". The Degree of Doctor of Science was conferred upon Dr. Anspach.

Dr. Robert V. Terrell,

Richmond, announces his return from military service and resumption of practice with Dr. E. H. Terrell in the Medical Arts Building. His practice will be limited to proctology.

Dr. Kinloch Nelson,

Richmond, announces his return from military service and is now associated with the Medical College of Virginia.

Dr. Julien H. Meyer,

Roanoke has been released from active duty with the Army and has opened offices at 306 Rosenberg Building, for the practice of gynecology and obstetrics.

Back in Civilian Practice.

In addition to those previously announced in the MONTHLY, we have been advised that the following members of the Medical Society of Virginia have been released from Service and have resumed practice:

Dr. B. Randolph Allen, Richmond.
Dr. Emerson Babb, Ivor.
Dr. W. Linwood Ball, Richmond.
Dr. Lee S. Barksdale, Hopewell.
Dr. Milton H. Bland, Norfolk.
Dr. George S. Bowers, Richmond.
Dr. William A. Brown, Jr., Portsmouth.
Dr. Harvey C. Brownley, Lynchburg.
Dr. Fielding J. Crigler, Charlottesville.
Dr. E. M. Ellerson, Staunton (now VA, Richmond).
Dr. Herman W. Farber, Richmond (now Petersburg).
Dr. D. I. Farnsworth, Richmond (now Oteen, N. C.).
Dr. Barnes Gillespie, Hilton Village.
Dr. F. H. Holt, Grundy.
Dr. E. L. Hopewell, Strasburg.
Dr. Chas. F. Kincheloe, Arlington.
Dr. Robt. B. Mallett, Orange.
Dr. Julien H. Meyer, Roanoke.
Dr. John W. Montague, Salem (now Richmond).
Dr. E. R. Moorman, Kilmarnock.
Dr. Fredk. M. Morrison, Lynchburg.
Dr. Harold I. Nemuth, Portsmouth.
Dr. John S. Pearson, Jewell Ridge (now Huntington, W. Va.).
Dr. Thomas E. Painter, Radford (now Richmond).
Dr. John A. Proffitt, Burkeville.
Dr. J. E. Rawls, Jr., Suffolk.
Dr. Samuel L. Rucker, Jr., Moneta.
Dr. George E. Snider, Pulaski.
Dr. W. R. Southward, Richmond.
Dr. Thomas N. Spessard, Norfolk.
Dr. Francis N. Taylor, Petersburg.
Dr. Wm. E. Tomlinson, Richmond.
Dr. W. B. Trivett, Big Rock.
Dr. George D. Vaughan, Jr., Richmond.
Dr. H. H. Wescott, Roanoke.
Dr. William R. Whitman, Jr., Roanoke.
Dr. Ennion S. Williams, Richmond.
Dr. James P. Williams, Richlands.
Dr. Wm. H. Wood, Jr., Charlottesville.
Dr. Munford R. Yates, Petersburg.

Entering Army of the United States.

Dr. Daniel T. Talley, III, of Richmond, and Dr. Randolph P. Pillow of Roanoke,

both of the class of '44, University of Virginia, Department of Medicine, have just entered Service with the rank of First Lieutenant in the Medical Corps.

Veterans Loan Fund.

The Council of the Medical Society of Virginia, at its winter session, authorized the setting aside of a fund of $10,000 to be used in loans to returning veterans for the purpose of post-graduate education or establishing themselves in practice.

This is to be administered by a committee appointed by the Council and any veteran interested should communicate with the executive secretary of the Society, at 1200 East Clay Street, Richmond 19.

Services for Unmarried Mothers and Their Children.

The Children's Bureau is issuing an 18-page handbook for the unmarried mother. This booklet was a joint undertaking of the Children's Bureau, the Bureau of Public Assistance of the Social Security Board, and the American Red Cross. It tells where the "illegitimately born" baby may obtain special case-work, financial assistance, medical nursing, hospital service, legal advice, and assurance of a good family life. Write the Children's Bureau, Department of Labor, Washington 25, D. C., for a free copy of "Services for Unmarried Mothers and Their Children".

Dr. D. I. Farnsworth,

Who was on the medical staff of the Medical College of Virginia for several years before entering the Service, has returned and is now connected with the Veterans Administration at Oteen, N. C.

Dr. O. L. Ramsey Honored.

The Lions Club of Chatham recently named Dr. Oscar L. Ramsey of Gretna as the most valuable citizen of Pittsylvania County for 1945, stating that he had given unsparingly of his time for others.

Veterans Administration, Richmond Branch Office.

The number of doctors entering the Veterans Administration's new Department of Medicine and Surgery is showing a steady increase, according to a recent report by Dr. Wilbur R. Southward, assistant medical director in the VA Richmond Branch.

During the 12 weeks of 1946 ended March 28, only 41 entered VA service in Virginia, North Carolina, West Virginia, Maryland and the District of Columbia. By April 18, however, that total

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had reached 96. Twenty-one of these physicians have been appointed members of rating boards engaged in examining veterans' disability claims. The others are in positions ranging from residencies to chief medical officer and consultant.

On April 17, the last day fully covered by the report, nine applications were received by VA in the branch area, and eight doctors were placed. Positions included one chief medical officer, one chief of physical medicine, three full-time staff doctors, two attending physicians (specialists in private practice and serving in VA hospitals part time) and one resident. One attending physician's position was in neurosurgery, the other in dermatology and syphilology.

Of the eight, four joined the McGuire Hospital staff in Richmond, one went to Mt. Alto, in Washington, D. C., and three were assigned to the VA Hospital at Kecoughtan, Va.

Chief reasons for the improvement in the recruitment program, Dr. Southward said, are the enhanced reputation of the VA medical service brought about by new policies, the attraction of modern facilities and working conditions being installed at a time when many young men have found it almost impossible to find space and equipment to open their own practice, and the unprecedented opportunities being offered both for practice in widely varied fields and for specialized studies under the prominent men working with VA through the Dean's Committees.

Dr. Southward reported that additional specialists and general practitioners will be engaged for the present in hospitals and clinics in the area as well as for the seven new hospitals, totaling 3,371 beds, which are to be built during the next two years. Figures received from hospitals and other installations as of April 1 indicated a need for approximately 195 physicians at that time. The total included 40 each in neuropsychiatry, general medicine and general surgery, 15 orthopedists, 35 in tuberculosis-general medicine, 5 X-ray, 15 physical medicine, and 5 cardiologists.

An additional 24 doctors were needed at that time for rating boards. It is anticipated that these positions will be particularly attractive to older men who are interested in work with regular hours or in part-time service.

Applications for medical positions with the Veterans Administration or requests for more detailed information should be sent to the Director of Medical Services, Veterans Administration, Richmond Branch No. 4, Richmond 20, Va.

Dr. Thomas E. Painter,

Recently discharged from the armed forces with the rank of Lieutenant Colonel, is now associated with the Westbrook Sanatorium, Richmond. Before entering the Service he was located at Radford.

Dr. Southward Receives VA Appointment.

Dr. Wilbur R. Southward, Richmond, has been appointed as assistant director of medical services of the Richmond branch office of the Veterans Administration. In this position, he will assist in supervising medical services at their hospitals, homes and offices throughout Virginia, North Carolina, Maryland, West Virginia, and the District of Columbia.

Dr. Barnes Woodhall, associate professor of neurosurgery at Duke University School of Medicine, has been named consultant in neurosurgery for the Richmond branch area.

Virginia Cancer Foundation.

At the meeting held in Richmond on April 22nd, Dr. William T. Sanger, Medical College of Virginia, was elected President to succeed Dr. I. A. Bigger. Dr. Julian L. Rawls, Norfolk, was named one of the vice-presidents, and Dr. George Cooper, Jr., University, re-elected director. Drs. Guy Horsley, Richmond, Joseph Houck, Lynchburg, and Alfred Jones, Roanoke, were among those elected as new directors; and Drs. George Z. Williams, Richmond, Dr. Cooper, Dr. Harvey E. Jordan, University, and L. C. Downing, Roanoke, were re-elected.

Dr. Paul E. Brady,

Class of December 1943, Medical College of Virginia, later serving at the College hospitals, has located in Columbus, Ohio, where he is assisting Dr. George Peters in general practice and surgery.

The American Congress of Physical Medicine

Will hold its annual scientific and clinical session September 4, 5, 6 and 7, inclusive, at the Hotel Pennsylvania in New York. Scientific and clinical sessions will be given each day. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions,

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the annual instruction courses will be held September 4, 5, and 6. These will be open to physicians and to therapists registered with the American Registry of Physical Therapy Technicians.

For information concerning the convention and the instruction course, address the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

The American College of Radiology

Announces that its annual meeting will be in San Francisco on June the 29th, the Saturday before opening of the A. M. A. meeting. College headquarters will be the Palace Hotel, and it is suggested that all its members and fellows make reservations there. Dr. M. Laurence Montgomery, 200 Civic Auditorium, San Francisco 2, California, is chairman of the local hotel committee. A special train for the College will be operated from Chicago to San Francisco, leaving Chicago on June the 25th.

The American Radium Society will also meet at this hotel on June 30th and July 1st.

The International College of Surgeons, United States Chapter,

Will hold its Eleventh Annual Assembly and Convocation in Detroit, October 21-22-23, 1946. Surgical clinics in Detroit hospitals will feature the first morning of the Assembly. Thereafter all meetings, the Convocation, and the Exhibition will be in the Masonic Temple, a splendid building affording every convenience. The Detroit Statler and the Book-Cadillac will be hotel headquarters.

Dr. Herbert Acuff of Knoxville, Tenn., is president; Dr. Custis Lee Hall of Washington, D. C., president-elect; and Dr. Louis J. Gariepy of Detroit, Mich., executive secretary. Copy of program and detailed information may be obtained by writing Dr. Gariepy at 16401 Grand River Avenue, Detroit.

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Obituaries

Dr. John Shelton Horsley,

A former president of the Medical Society of Virginia and internationally known surgeon, died at his home in Richmond on April the 7th, at the age of seventy-five. A native of Nelson County, he studied medicine at the University of Virginia, from which he graduated in 1892, and took postgraduate work in New York. After a short time in Virginia, he went to El Paso, Texas, but in a few years returned to Virginia and had since made his home in Richmond. He served as professor of the principles of surgery at the Medical College of Virginia from his return until 1912. He established St. Elizabeth's Hospital that year and continued as surgeon-in-charge to the time of his death. He had done much research work in cancer and was a member of the National Advisory Cancer Foundation and a past president of the Virginia Cancer Foundation. He was an author of note and was the recipient of many honors in recognition of his work as a surgeon, including the presidency of numerous local and national organizations. To encourage research, he established a memorial to his father through a prize of approximately $1,000 to be awarded every two years by a committee in the Department of Medicine at the University of Virginia for an outstanding thesis on research in a problem of general surgery. He was intensely interested also in the Virginia Academy of Science and a former president. Indeed, one wonders how he was able to accomplish so much in his little more than "three score years and ten".

Dr. Horsley is survived by his wife and six chil-

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dren, one of them being Dr. Guy W. Horsley, of this city.

Dr. Maryus Curtis Oldham,

Prominent physician of Lancaster, died February 27th of a heart attack, while on the way to a hospital. He was sixty-five years of age and a graduate of the former University College of Medicine, Richmond, in 1903. Dr. Oldham had practiced in Lancaster County since his graduation and had taken an active part in professional and civic activities. He was for a number of years secretary of the Lancaster County Board of Health, County Coroner, and jail physician. He was a Mason and a past president of the Northern Neck Medical Association. Dr. Oldham had been a member of the Medical Society of Virginia since 1904. His wife and an adopted daughter survive him.

Dr. Moses Peter Rucker,

Well-known physician of Bedford, died of pneumonia on April 4th. He was sixty-nine years of age and graduated from the University of Maryland School of Medicine in 1904. Dr. Rucker had been practicing in Bedford since his graduation. He was a past president of the Bedford County Medical Society, a surgeon for the Norfolk and Western Railroad, and a Mason. He had been a member of the Medical Society of Virginia for thirty-one years. His wife and a daughter survive. A brother is Dr. J. A. Rucker, also of Bedford.

Dr. Richard Henry Cobb,

Prominent physician of Franklin, died in January after an illness of many months. He was eighty-two years of age and graduated from the University of Tennessee School of Medicine in 1883 at the age of nineteen. Dr. Cobb had practiced in Franklin since his graduation and internship and was considered "a part of Franklin" as he had "witnessed its growth from a small village to its present size and many of the people of this town and community were brought into this world by his professional care and skill." He was a member of the Franklin School Board for twenty-three years and a former member of the Town Council. Dr. Cobb was one of the oldest members of the Medical Society of Virginia, having been a member for sixty-two years. Four daughters survive him.

Dr. Nathan W. Stallard,

Prominent Scott County physician, died December 18, at the age of 82, death being due to heart disease. He graduated in medicine from the College of Physicians and Surgeons of Baltimore in 1885, and spent his whole professional life in his native county. He was a former president of the Scott County Medical Society, secretary of the County Board of Health, postmaster, and a member of the town council. He was also a member of the Scott County Draft Board during World War I.

Dr. Thomas Morton Raines,

Wakefield, died April 4th, at the age of seventy-three. He was a graduate of the Medical College of Virginia in 1907 and began the practice of medicine in Wakefield in 1908. Dr. Raines was formerly a member of the Medical Society of Virginia. His wife and two children survive him.

Resolutions on Dr. Gochnauer.

At the regular meeting of the Medical Society of Northern Virginia on April the 9th, the following resolutions were read on the death of Dr. Frederick Gochnauer, which occurred October 9, 1945:

WHEREAS Almighty God has seen fit to call our friend and co-worker, Dr. Frederick Gochnauer, to rest from his labors on earth,

And, WHEREAS, we, the members of the Northern Virginia Medical Society, are deeply grieved by his passing; we will miss his genial smile, wise counsel and deep understanding.

THEREFORE BE IT RESOLVED that we extend to his family our deepest sympathy in their sorrow;

BE IT FURTHER RESOLVED that a copy of these resolutions be sent to Mrs. Gochnauer and be spread upon the minutes of the Society.

CHARLES O. DEARMONT, *Chairman*
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New-Born Polish Babies Show Decrease in Weight.

The low standard of feeding in Poland has resulted in an average decrease of 30 per cent in the weight of newly born babies, according to a dispatch from the UNRRA Health Division representative in Warsaw received at Washington headquarters of the United Nations Relief and Rehabilitation Administration. Added to this is the alarming fact that infant mortality has gone up from 12.4 per cent to 27 per cent and in some places near the German border, to 50 per cent.

The effect of malnutrition added to the conditions of life where whole families are crowded into a single room, often amid ruins, accounts for the rise of tuberculosis among children. In Warsaw the Pirquet test gave positive results in 84 per cent of the children, and 50 per cent of them were active cases.

However, the number of clinics and orphanages in Warsaw has doubled in the last two months, and now there is some hope for such children. In most of the emergency homes for orphans and destitute waifs early last winter the only bedding was straw and there was no milk. Now, with extensive help from UNRRA supplies, children both in the institutions and in schools are given some food, warmth and clothing.

Throughout Poland the Ministry of Health is conducting a drive to lower the infant mortality rate and the percentage of tubercular cases among children. Expectant mothers are being taught how to get the most value from the food available and how to care for themselves. Children are being fed in school and used clothing, delivered by UNRRA, is distributed quickly and efficiently among them.

London Air Raids Did Not Increase Mental Disorders During War.

The devastating air raids over London during the war years did not increase mental disorders, according to the London correspondent of *The Journal of the American Medical Association.*

This conclusion, appearing in the March 30 issue of *The Journal,* was based on reports from 216 clinics dealing with mental patients in England. The correspondent said in part:

"The important conclusion is reached that there are no grounds for supposing that the war has caused an increase in the more serious forms of mental disorder requiring admission to a hospital. This is remarkable in view of the heavy bombing, with considerable loss of life and injuries to persons and destruction of buildings in our cities while the country was passing through the greatest danger to which it ever was exposed.

"The threat remains that the coming years may show an increase in neurotic disorders as a result of the difficulties of adjustment associated with demobilization and the return of prisoners who have endured German barbarities."

Dr. C. P. Blacker, who undertook the survey with the cooperation of the Ministry of Health, believes it possible that latent neurosis "may reveal itself in the civilian population when the stresses of war are relaxed."

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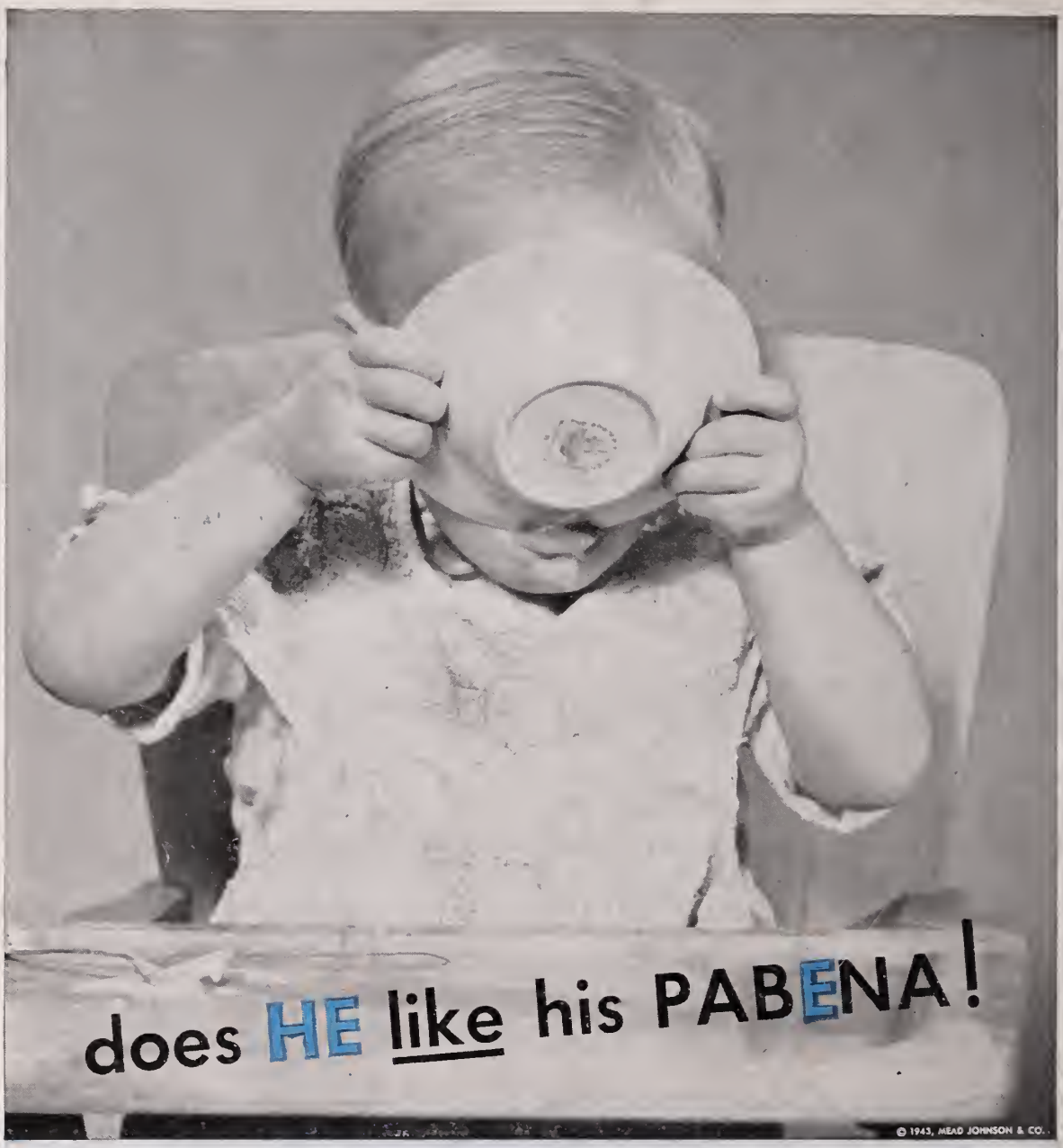

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GUEST EDITORIAL

Transthoracic Vagotomy for Peptic Ulcer

THE cause of ulcer of the duodenum or stomach is not yet thoroughly understood and treatment is not yet entirely satisfactory. Recent clinical developments are therefore of interest to the physician who treats ulcer patients. It is known that two important mechanisms regulate gastric secretion and motility, and may influence the development and the persistence of peptic ulcer. One is hormonal or chemical and is usually activated by the presence of food in the stomach or duodenum. The other is nervous and responds to stimuli of a neurogenic, psychogenic, or reflex nature.

New treatments that affect the chemical mechanism have been reported. Co Tui and his associates have used a protein hydrolysate diet. Ivy has studied the effect of enterogastrone which inhibits the chemical mechanism. McElin and Horton have employed an antihistamine preparation, Benadryl. Certain patients are refractory to medical treatment and require subtotal gastric resection. This procedure interrupts the chemical mechanism by removing the antrum of the stomach and excluding the duodenum. Although gastric resection has proved an effective treatment for many patients it may be associated with poor nutrition and occasionally with the development of a stoma ulcer.

Surgical treatment has recently been directed at the nervous mechanism that regulates gastric secretion and motility. The visceral afferent and efferent fibers of the vagus are known to play an essential role in this neural regulation. Dr. Dragstedt and his associates in 1943 introduced transthoracic supradiaphragmatic resection of the lower portion of the two vagus nerves and their branches about the lower esophagus as a substitute for gastric resection. He has used this relatively simple operation in more than seventy patients. There are twenty-seven additional cases in our series.

Preliminary observations of the effect of vagotomy have been encouraging. The patients are exceptionally well-pleased, eat normal diets, are relieved of symptoms of ulcer, and gain weight. All ulcers have evidently healed and as yet there is no evidence of recurrence. Physiological studies have demonstrated that the motility of the fasting stomach is markedly decreased. The volume and the acidity of the secretions of the fasting stomach are also decreased. The immediate relief of pain after vagotomy may be related to decrease of motility or spasm, decrease of acidity, or possibly to interruption of some pain pathways from the stomach. In three patients with partial obstruction at the ulcer site the decrease of motility has necessitated Finney pyloroplasty or gastro-jejunostomy. Vagotomy is at the present time an experimental procedure. Early observations, however, indicate that the operation yields gratifying results even in patients with intractable pain, stoma ulcer, or recurrent hemorrhages.

Since vagotomy should block the neurogenic, psychogenic, or reflex gastric secretory mechanism and should leave the chemical or hormonal mechanism intact, the results of vagotomy seem to indicate that these neurogenic factors should receive careful consideration in either medical or surgical treatment.

KEITH S. GRIMSON.*

NOTE: Dr. Grimson is Assistant Professor of Surgery at the Duke University School of Medicine, Durham, North Carolina.

DELAYED TONSILLAR HEMORRHAGE*

H. GRANT PRESTON, M.D.,
Harrisonburg, Virginia.

Among the potential complications of tonsillectomy, few cause as much concern as secondary bleeding, a condition which interferes with a smooth convalescence and may be even dangerous. We have never observed such hemorrhages later than on the eleventh post-operative day and usually they occur from the fifth to the tenth day after surgery. This is the time when starvation and excessive granulations might be expected to aggravate any factors favoring bleeding.

It is difficult to obtain an accurate picture of the frequency of delayed bleeding encountered by the individual surgeons. Inquiries concerning the incidence of secondary hemorrhage have occasioned statements ranging from "extremely rare" to a frequency of 10 per cent. Accurate figures are often not available because patients bleeding only slightly may call the general practitioner without the surgeon's even knowing of the complication. Again, the operator may treat a patient in his office and no hospital record is kept of the incident.

CASE MATERIAL

The present paper deals with 1808 patients subjected to tonsillectomy during the period 1939 to 1944, inclusive. It has been our practice to instruct every patient to report to the hospital in case of bleeding. Therefore, the observations presented should reflect the true situation, except for those few patients who bled but, disregarding our instructions, did not report to us.

One hundred and eight hemorrhages (5.97 per cent) were encountered in the whole series. Of these 25 occurred within 24 hours after surgery and 83 were delayed. Thus, this latter variety constituted about 76.8 per cent of all the bleedings encountered. Primary hemorrhages, which are probably due to imperfect hemostasis at the time of operation, are not considered here. Table I shows the number of operations performed and the incidence of delayed hemorrhage in each year.

*Read before the Virginia Ophthalmological and Otolaryngological Society, April 28, 1945.

TABLE I.

Year	Number of T & A	Number of delayed hemorrhages	Percent of delayed hemorrhages
1939	284	13	4.57
1940	256	11	4.29
1941	226	16	7.07
1942	303	19	6.27
1943	354	16	4.52
1944	385	8	2.08

Incidence of delayed hemorrhages encountered after tonsillar operations in years 1939-1944.

Naturally, such a high incidence of secondary hemorrhage as encountered by us before 1944 presented a challenge to investigate the etiology of this complication and to lower its occurrence.

CAUSES OF DELAYED HEMORRHAGES

General Considerations.—Late tonsillar bleeding has been ascribed to numerous causes, such as: hepatic disease; blood dyscrasia; syphilis; malnutrition; vitamin C deficiency; excessive trauma; premature sloughing of the covering membrane resulting in capillary oozing; infections; and administration of certain drugs.

Undoubtedly these are all contributing factors. As to their relative importance, however, opinions are divided. For instance, some workers believe that infection of the tonsillar fossae is an all-important etiologic factor. If this were so, then the highest percentage of bleeding should be encountered during those months of the year in which pneumococci, staphylococci, and hemolytic streptococci are prevalent in cultures from patients with acute or chronic naso-pharyngeal infections. With this in mind, all such cultures studied in the Rockingham Memorial Hospital Laboratory during a four-year period were reviewed. As had been expected, there was a higher incidence of positive cultures in November, December, January, February, and March as compared with those of June, July, August, and September. With the object of correlating these findings with the occurrence of late hemorrhage encountered during the same groups of months in the period from 1939 to 1943, inclusive, the annual figures of Table I were broken down to monthly figures (Chart I).

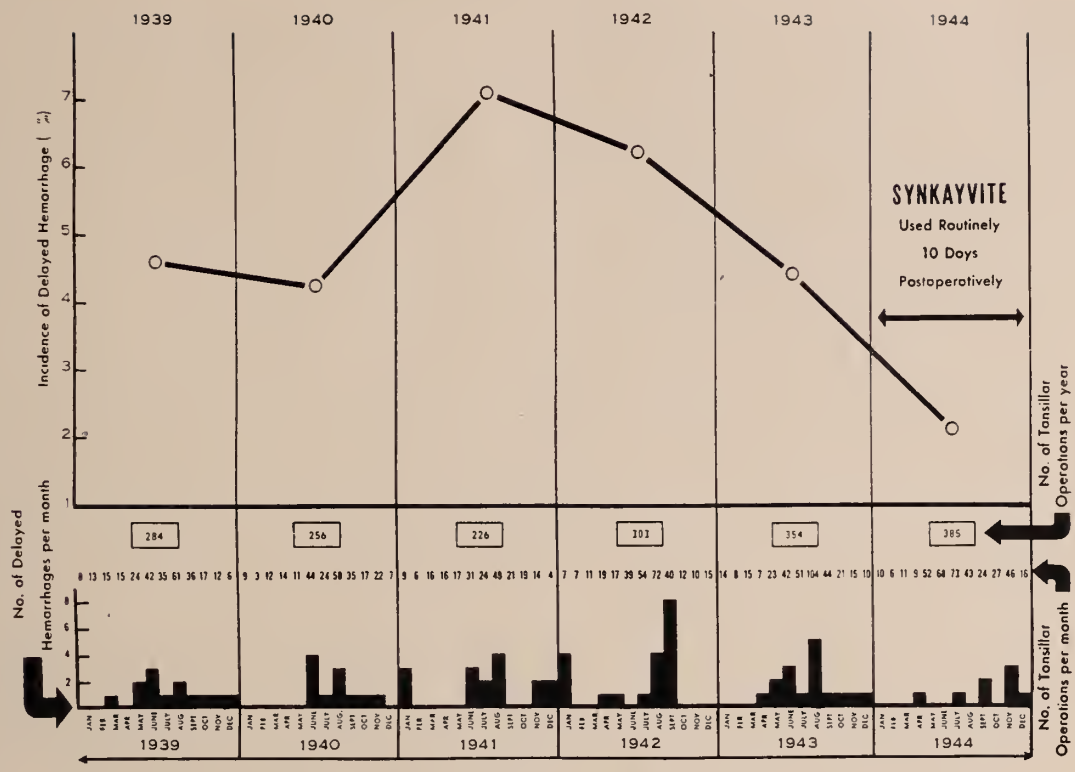


Chart 1. Graphic analysis of tonsillar operations during the period 1939-1944, showing incidence of delayed hemorrhages.

Calculated on a percentage basis, it appears that in the winter months, characterized by a higher incidence of infection, the frequency of hemorrhage (namely, 6.3 per cent) is higher than during the summer months (5.3 per cent). However, this difference is not sufficiently significant to look upon infection, although unquestionably favoring hemorrhage, as an all-important factor in its causation.

The opinion was voiced by some that a seasonal factor is of paramount importance in the causation of late bleeding. They claim that hemorrhages are prone to occur during the hot months of the year. Our figures show that heat is no more the all-important factor than infection, although we feel that high temperatures are a contributing factor. The work by Mills and his associates[1] lends credence to this supposition. These investigators observed that hemorrhagic states rarely developed in rats kept at moderately cool temperatures. In tropical heat, however, especially older animals were prone to severe hemorrhages when fed on a vitamin K-free diet. Addition of vitamin K prevented hemorrhagic states but the requirement of the antihemorrhagic vitamin per gram of food was found to be twice as high for rats in a hot environment as for those in a cold one. Clotting tests revealed that the delay was more marked among the former animals than among the latter. The above authors suggest that the heat may interfere with the production of vitamin K by intestinal bacteria. Furthermore, they suspect that a higher prevalence of vitamin K deficiency among residents of tropical climates may account for the four times greater incidence of hemorrhagic disease among infants born in the Gulf States than among those born in the north. If this suspicion is warranted, it is also possible that vitamin K deficiency is more frequent clinically during the hot season than the rest of the year. An adequate supply of this vitamin is necessary for production of prothrombin, essential for normal blood clotting. Consequently, a state of hypoprothrombinemia may develop more readily during the summer months and this may account for a considerable incidence of delayed tonsillar hemorrhage in the hot season.

Drug-Induced Prothrombinopenia.—In connection with the foregoing, the prothrombin-lowering effect of the salicylates, already demonstrated by several investigators, must be considered. Link[2] and his coworkers produced hypoprothrombinemia by feeding

salicylates to rats kept on a vitamin K deficient diet. Many of the animals died with hemorrhagic manifestations. Administration of vitamin K had a protective effect against the salicylate action. Soon clinicians[3,4,5] took up the work and proved that therapeutic doses of salicylates induced prothrombinopenia in healthy subjects and in rheumatic fever patients. Furthermore, vitamin K was shown to counteract, also in humans, the salicylate effect on prothrombin. Recently Fashena and Walker[6] reported a case of rheumatic fever in which medication with salicylates prolonged the prothrombin time to 2 minutes 45 seconds—"a value more than five times the normal, which connotes almost complete absence of circulating prothrombin". In this instance a daily dose of 8 gm. of sodium salicylate had been given for several days. Although such high doses are not administered in tonsillar cases, the amounts utilized for post-operative pain-relief may result in a hypoprothrombinemic state. Such salicylate-induced prothrombin deficiency may become pronounced during the hot season when there is tendency to avitaminosis K.

Neivert,[7] working with Pirk and Engelberg, investigated the prothrombin effect of aspirin alone and in combination with Synkayvite, the Roche vitamin K-like compound, in healthy subjects. Oral administration of 40 gr. (2.6 gm.) acetylsalicylic acid a day in divided doses resulted in a significant prothrombin deficiency. In some cases the hypoprothrombinemia became evident after but one day of salicylate medication, while in others a longer period was required. Concurrent vitamin K administration afforded full protection against the salicylate-induced prothrombinopenia. Furthermore. Neivert studied prothrombin levels in tonsillar cases preoperatively and post-operatively. There was a significant decrease of prothrombin five to seven days post-operatively in those patients who had been given aspirin alone. In a second group the salicylate was given in combination with Synkayvite (either in form of suppositories or tablets) with 5 mg. of the vitamin K preparation added to each 5 gr. of aspirin. The patients of this group, on re-examination five to seven days post-operatively, showed either no decrease of prothrombin at all, or at the most, a reduction which could not interfere with normal clotting.

LABORATORY EXPERIMENTS

In an attempt to corroborate these findings, we carried out prothrombin estimations in 20 healthy individuals before and after salicylate medication. In the beginning, we used the Page method,[8] a very intricate procedure, which in our hands was difficult to control. We then switched to the technique devised by Quick,[9] utilizing first whole, and later diluted, plasma.

Few of our cases showed such marked and continued salicylate-induced hypoprothrombinemia as that observed by Neivert. Notwithstanding this, the accuracy of his findings is not disputed. It is realized that the difficulties encountered in performing prothrombin assays according to Page's method are largely responsible for our failure to demonstrate the prothrombin lowering effect of salicylate in all subjects studied.

Of those who responded significantly the findings in a student nurse are here presented. Miss Veda G., with a prothrombin time of 20.5 seconds (determined by Quick's method in diluted plasma), was given 40 gr. of aspirin a day in divided doses for 15 days. There was a continuous rise of the prothrombin time, reflecting a decrease of prothrombin activity. When the prothrombin time was prolonged to 28 seconds, experimental tablets, each containing 5 gr. of acetyl-salicylic acid and 5 mg. of Synkayvite were substituted for aspirin and given for five more days. The prothrombin time dropped promptly and continued to do so when Synkayvite alone was given. The accompanying Chart 2 illustrates the procedure, the dosage employed, and the results obtained in this subject, and in a control. As evidenced by these results and by similar findings in other subjects, the addition of Synkayvite to aspirin affords protection against salicylate-induced prothrombinopenia.

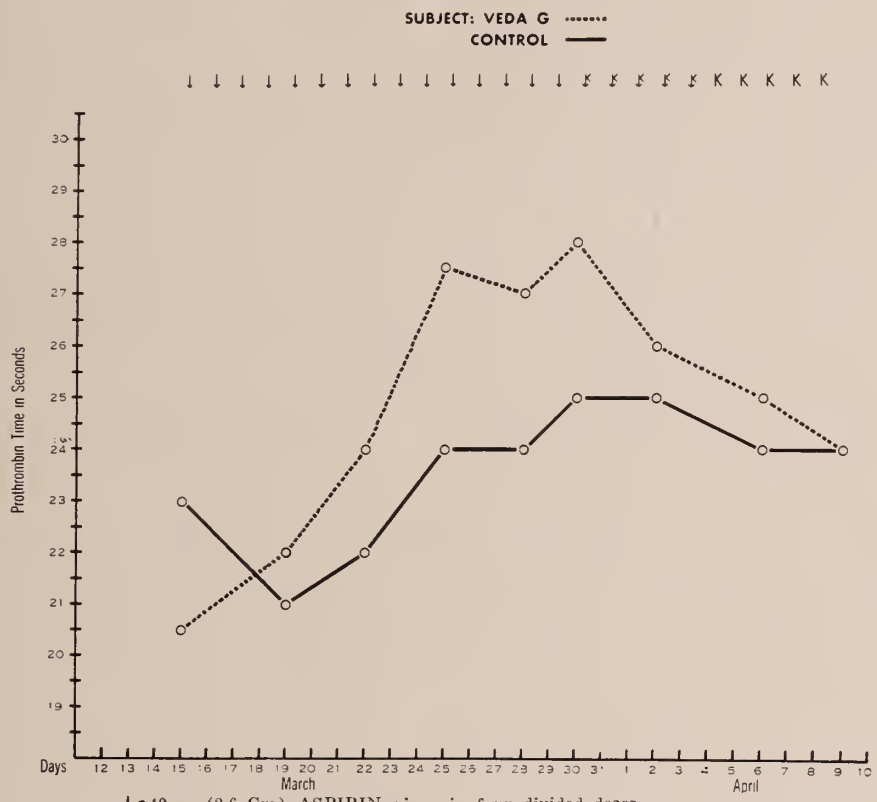
CLINICAL STUDY

We have been considering for some time the possibility that a vitamin K deficiency is an important factor in the causation of late tonsillar hemorrhage. With Link's discovery of a prothrombinopenic effect of salicylic acid in rats and with the duplication of his findings by other investigators in humans, the routine administration of vitamin K to tonsillar patients seemed a logical step. Consequently, since the beginning of 1944 each of our patients received

a prescription for Synkayvite tablets. Adults were instructed to take two of these (10 mg.) a.c. and h.s. for ten days post-operatively. Children were given only 5 mg. per dose. In addition, patients were advised to take aspirin, before meals, sparingly according to need. The single dose in adults was 5 gr. and in children 2½ gr.

In a small series of patients, tablets containing a combination of aspirin and vitamin K were employed. With nursing care at a premium, these proved practical and useful in the hospital routine. However, patients rarely need an analgesic for full ten days after a tonsillectomy. On the other hand, vitamin K should be given until the danger of hemorrhage is passed. Therefore, we returned to separate administration of the antihemorrhagic vitamin and the analgesic as outlined above.

Under this regimen, there were eight late hemorrhages in a series of 385 cases, an incidence of 2.08 per cent. This compares very favorably with our findings of the five previous years when vitamin K administration had no part in the post-operative routine. The incidence of delayed hemorrhages then ranged from 4.29 per cent to 7.07 per cent. In relation to the incidence of bleeding in the years 1939, 1940, and 1943, this is a decrease of about 50 per cent. If compared with our findings in 1941 and 1942, the decrease is even 70 per cent and 66 per cent respectively. The upper part of Chart I demonstrates graphically the reduced incidence of hemorrhage in 1944, when adequate doses of Synkayvite were given. Of the patients who bled, one required a suture; in one hemostasis was accomplished by application of an astringent and in the remaining six sedation and bed rest were the only measures necessary. It was obvious that the few episodes of hemorrhage occurring in the 1944 series were of less consequence and required less surgery than those encountered during previous years when vitamin K was not administered post-operatively. Then a suture or tie was usually required since attempts at hemostasis by local application of an



↓ = 40 gr (2.6 Gm) ASPIRIN given in four divided doses.
↓ = 40 gr (2.6 Gm) ASPIRIN + 40 mg. SYNKAYVITE given in four divided doses.
K = 40 mg SYNKAYVITE given in four divided doses.

Chart 2. Curves of prothrombin time recorded for subject Veda G. and a control after oral administration to the former of acetyl salicylic acid, after acetyl salicylic acid-Synkayvite medication, and after administration of Synkayvite.

astringent or by injection of a vaso-constrictor around the bleeding point failed in most instances.

SUMMARY AND CONCLUSIONS

Observations on a series of 1,808 patients subjected to tonsillectomy during the years 1939 to 1944 inclusive are presented. In these 108 hemorrhages occurred, of which the great majority (76.8 per cent) were delayed.

Secondary tonsillar bleeding may result from a variety of causes. We cannot ascribe to any one factor exclusive significance. However, infection, salicylate-induced prothrombin deficiency and K-hypovitaminosis are among the most important predisposing factors.

Evidence is presented that in some individuals a daily dose of 40 gr. acetyl-salicylic acid causes a significant prolongation of the prothrombin time after only a few days of medication. In others, it takes longer for the hypoprothrombinemia to develop, depending on the individual's vitamin K reserve and diet. Since prothrombin deficiency interferes with normal blood clotting, salicylates should not be used in any form for post-tonsillectomy analgesia unless given in conjunction with vitamin K in adequate dosage.

The incidence of late tonsillar hemorrhage, ranging in the years 1939 to 1943 inclusive from 4.29 per cent to 7.07 per cent was reduced to 2.08 per cent in 1944 when Synkayvite tablets were administered routinely.

ACKNOWLEDGMENTS

I wish to express my sincere thanks to Dr. W. E. Bray, Director of the University of Virginia Laboratory, who not only graciously supplied thromboplastin, but also checked our prothrombin results on several subjects.

My gratitude goes also to the staff of the Rockingham Memorial Hospital Laboratory, especially to Mrs. Elizabeth Harman, who, in carrying out the many prothrombin tests, gave unstintingly of her time, thus making this work possible. Furthermore, credit must be given to Dr. R. Engelberg, of Presbyterian Hospital, of New York, who imparted her great experience in carrying out Page's technique of prothrombin assays to Mrs. Harman. Dr. Leo A. Pirk, of Hoffmann-La Roche, Inc., Nutley, New Jersey, was very generous with material and his helpful suggestions regarding execution of this study are appreciated.

BIBLIOGRAPHY

1. Mills, C. A., Cottingham, E., and Mills, M.: Environmental Temperature and Vitamin K Deficiency. *Am. J. Physiol.* **141**:359 (May), 1944.
2. Link, K. P., Overman, R. S., Sullivan, W. R., Huebner, C. F., and Scheel, L. D.: Studies on Hemorrhagic Sweet Clover Disease: Hypoprothrombinemia in the Rat Induced by Salicylic Acid. *J. Biol. Chem.* **147**:463 (February), 1943.
3. Rapoport, S., Wing, M., and Guest, G. M.: Hypoprothrombinemia after Salicylate Administration in Man and Rabbits. *Proc. Soc. Exper. Biol. and Med.* **53**:40 (May), 1943.
4. Meyer, O. O., and Howard, B.: Production of Hypoprothrombinemia and Hypocoagulability of Blood with Salicylates. *Proc. Soc. Exper. Biol. and Med.* **53**:234 (June), 1943.
5. Shapiro, S., Redish, M. H., and Campbell, H. A.: Studies on Prothrombin: Prothrombinopenic Effect of Salicylate in Man. *Proc. Soc. Exper. Biol. and Med.* **53**:251 (June), 1943.
6. Fashena, G. J., and Walker, J. N.: Salicylate Intoxication: Studies on the Effects of Sodium Salicylate on Prothrombin Time and Alkali Reserve. *Am. J. Dis. Child.* **68**:369 (December), 1944.
7. Neivert, H.: Lecture given before the Section on Otolaryngology at the New York Academy of Medicine, May 17, 1944.
8. Page, R. C., de Beer, E. J., and Orr, M. L.: Prothrombin Studies, Using Russell Viper Venom: Relation of Clotting Time to Prothrombin Concentration in Human Plasma. *J. Lab. and Clin. Med.* **27**: 197 (November), 1941.
9. Quick, A. J.: The Nature of the Bleeding in Jaundice. *J.A.M.A.* **110**:1658 (May 14), 1938.

CHORIO-EPITHELIOMA WITH HERPES GESTATIONIS REPORT OF A CASE*

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In presenting the case herein described we wish to add another report to the literature on this subject, and to record a group of findings which may add to the already accumulated knowledge of one of the unusual types of malignancy. Chorio-epithelioma is in itself far from common, and herpes gestationis may be considered rare. Here, however, a single case was encountered wherein both of these conditions were present and in which we were able to secure a rather complete study. The time interval, which elapsed between the opening act in its history and the final curtain, covered a period of four years, and the attention of the writers was first attracted not to a malignancy, but rather to what was considered to be a most unusual complication of normal pregnancy. Before going directly into the case we wish to discuss briefly some phases of the two conditions.

The subject of chorio-epithelioma was first referred to in the literature by Gregorini[1] in 1795. He reported a case of malignant degeneration of a hydatidiform mole in which metastatic growths appeared in the lungs following the expulsion of the mole. Sanger[1] in 1888 described the growth, believing it to be a sarcoma arising from the decidua and therefore of maternal origin. Frankel[1] showed its origin in the epithelium of the chorion and considered it a carcinoma. Marchand,[1] however is entitled to the credit of identifying the true histogenesis of the growth. He demonstrated the origin to be in the syncytium and Langhans' layers of the chorion and named it chorio-epithelioma malignum.

Deciduoma malignum may be considered to represent a singular development in malignant teratomata, but the failure to demonstrate teratomatous elements casts doubt upon this theory (Maun and Green[2]). Usually it is found that the process develops subsequent to some form of pregnancy. It may follow normal pregnancy, abortion, ectopic pregnancy or hydatid mole. The last is the most frequent offender, as about 5 per cent of these become malignant. Hertig,[3] of the Boston Lying-In Hospital, in 1940 observed that hydatid degeneration of the chorion is not infrequent. He showed that approximately 50 per cent of all spontaneous abortions are due to defective ova, and more than 60 per cent of these present some hydatid degeneration of their villi. Again, all of us have seen abortions yielding large amounts of placental tissue but without any evidence of foetal form. Hydatid degeneration is common in these placentae. A consideration of the foregoing may perhaps lessen our over-enthusiasm for various methods of preventing spontaneous abortion. Finally, it is to be remembered that malignancy may appear only after a period of many years has elapsed.

The diagnosis of tumors arising from the chorion is most perplexing. Even in normal pregnancy the implantation of the placenta itself is dependent upon invasion of the uterine wall, the trophoblastic tissue penetrating the uterine veins and being deported to distant parts of the body. This is very closely akin to malignancy, and Novak has referred to it as a "Physiologic Metastasis". The presence of metastases, therefore, does not absolutely decide the question of malignancy for the reason that the primary, as well as the secondary growths, may regress and disappear completely. In these cases a correlation of the clinical features, microscopic findings, and laboratory studies is imperative if a correct diagnosis is to be attained.

In regard to the application of the Friedman test, we believe that this procedure is by no means infallible. In this condition the test is strongly positive even when the spinal fluid is used, and frequently a quantitative determination may be made. Mistakes, however, do occur, as two cases of chorio-epithelioma with negative Aschheim-Zondek tests were reported by Tuchschmid[4] in 1943. One of us has seen a total removal of the pelvic viscera performed on a patient, who suddenly developed a positive reaction in the spinal fluid following a previous

*Read before Manchester Medical Society, Richmond, February 5, 1946.

abortion. After operation, examination failed to show any pathology in the tubes, ovaries, or uterus.

The prognosis is always to be guarded in these cases, as unexpected recoveries may occur. In certain cases the microscopist will be absolutely unable to decide as to the course of events. It is believed that regression rarely if ever occurs in those types with a preponderance of Langhans cells. Removal of the primary growth is imperative. This includes the extirpation of the entire uterus and any secondary growths in the vagina or vulva. Radiation therapy is customarily advised.

The skin eruption in this case is similar to that reported by Elliott[5] in 1938, in association with a chorio-carcinoma secondary to a hydatidiform mole. Inasmuch as the cutaneous manifestations appeared about the time that the malignancy began to grow, and since they became more extensive with increased activity of this malignant growth, he concluded that the skin rash should be classified as herpes gestationis.

Herpes gestationis was first described by Bunel in 1911, and is an uncommon cutaneous complication of pregnancy characterized by a recurrent generalized vesicular eruption associated with severe itching. The etiology of the disease is unknown. Some authors feel that the lesions result from injury to the vasomotor nerves by toxins manufactured by the fetal tissues or by cells of the chorionic epithelium, while other investigators have advanced the theory that renal insufficiency is the cause. Rostenberg[6] reports that the gonadotropin was protracted for several months after parturition in these cases. Weidman[7] observed that the degree of pruritus varied with fluctuations in the gonadotropic principle but Antoine[8] thought that a toxicosis produced by the ovum in association with an unknown virus was causative.

This condition may appear at any time during pregnancy, although it is more common in the latter half, and is more frequent in primiparae between 30 and 35 years of age. The disease may recur in successive pregnancies or return intermittently every second or third pregnancy. There is intense and persistent pruritus in the early stages followed by a generalized herpetiform vesicular rash covering the entire body. Eosinophilia during the acute stage may range as high as 50 per cent. Treatment is non-specific and local applications such as soothing lotions for the relief of itching are helpful until termination of the pregnancy brings about its resolution.

REPORT OF A CASE

Mrs. L. W., age 34, entered the hospital on September 25, 1945, acutely ill and suffering from a diffuse rash which covered the entire body and involved the palms of the hands and the soles of her feet. Morphine had been given for relief of the intense itching and burning. She was vomiting,

Fig. 1

and stated that she had never had a well day since becoming pregnant. Her last menses occurred on April 1, but no movements had been felt. During

Fig. 2

this pregnancy she had suffered with marked nausea and progressive weakness, and had been treated in a hospital in a nearby city for two attacks of vaginal

Fig. 3

bleeding. Each of these responded to rest in bed. On August 5 three vaginal cysts were removed. These were filled with bloody fluid, but microscopic

Fig. 4

examination showed no trace of malignancy. Following her return home she continued to become weaker, nausea increased, and on September 1 she noticed "mosquito bites" on the arms, legs, and abdomen which itched from the start. The rash gradually spread and the discomfort became most distressing. She believed that she had lost 25 pounds since April.

The family history and her past history are both unessential until the birth of her child now ten years of age. Four years ago she aborted accidentally at two and one-half or three months' gestation. It

Fig. 5

is noteworthy that no fetus was seen at this time, and so much bleeding occurred that two curettements were required. Several weeks later she was again curetted by a second surgeon who was purposefully "looking for cancer" but nothing was found.

Examination revealed a white female, emaciated, vomiting, restless, and in pain. Temperature, pulse and respiration were normal and the heart and lungs were negative on physical examination. Over the trunk and extremities there was a generalized symmetrical papulo-vesicular rash with some excoriated and secondarily infected areas. (Figures 1, 2, 3, 4 and 5.) An abdominal mass, apparently the uterus, extended 10 cm. above the symphysis pubis. An-

Fig. 6

other mass was palpated in the region of the left ovary but this finding was not definite.

Laboratory studies were not unusual except for a white count of 10,500 and hemoglobin of 64 per cent. These figures changed gradually to show an increasing infection and a progressive secondary anemia. On October 3 an eosinophile count of 10 per cent was noted. Blood urea was 34 and the urinary examination showed a mild infection. The Wassermann was negative and she was Type "A", Rh positive. A Friedman test on September 1 was reported positive.

The following day the patient was seen by members of the surgical, obstetrical and dermatological services. In view of the patient's serious condition and the above findings, we felt that a diagnosis of herpes gestationis with missed abortion was justifiable, and it was decided to interrupt pregnancy per vaginam. Accordingly, two catheters were inserted into the uterus on Wednesday, September 26. During the next four days various drugs were used to accelerate the emptying of the uterus but nothing happened. X-ray of the uterus showed two catheters with no suggestion of fetal form.

Until this time all of us believed her to be pregnant, but now it appeared very doubtful and, to decide this beyond any doubt, the cervix was dilated, using a small Voorhees' bag. By this means the operator was able to palpate a mass adherent to the uterine wall which could not be identified, ex-

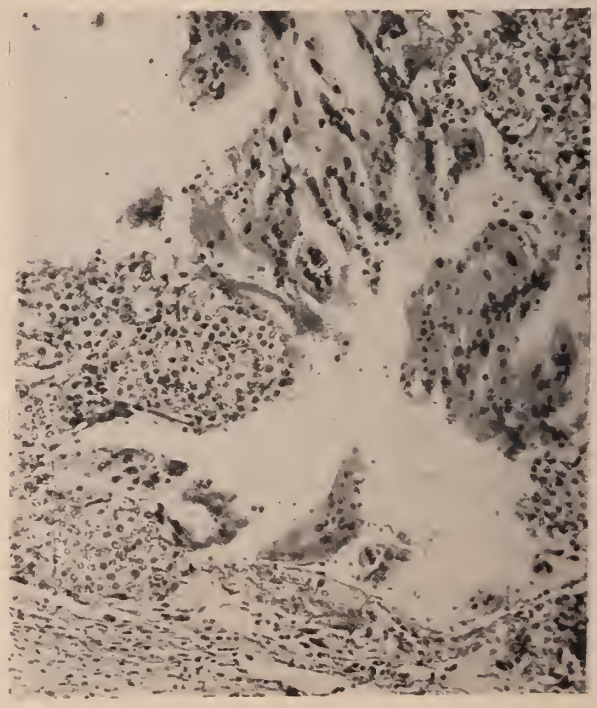

Fig. 7

cept to say that it consisted of degenerated, necrotic, almost bloodless, material. Portions were removed

Fig. 8

with the examining fingers and frozen sections made, but no cell structure was found definite enough to determine the nature of the growth.

Fig. 9

In view of the above findings we were now clinically sure of a diagnosis of chorio-epithelioma, and it was decided to open her abdomen even though her grave condition and infected skin over the abdomen made this a most serious procedure. The operation consisted of total hysterectomy and bilateral salpingo-oophorectomy. The patient stood the operation well and reacted nicely following two transfusions.

The pathological report showed a tumor mass in the uterus as large as an orange, the uterus itself being enlarged to the size of a four-months' pregnancy. Both ovaries were cystic, the left being greatly enlarged and showing solid masses of chorio-epithelioma. (Figure 6) Microscopic examination

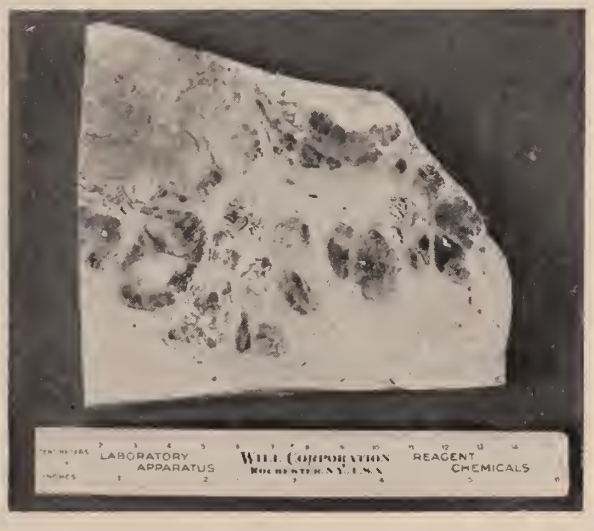

Fig. 10

showed chorio-epithelioma which was later classified by Dr. Broders of the Mayo Clinic as Grade 3 malignancy. (Figure 7) There was no evidence of any metastasis in the abdomen.

Following operation the skin healed completely, and the patient improved for about two weeks. Then she began to cough and expectorate a little blood, and x-ray examination on October 15 showed metastatic malignancy filling the lungs. A Friedman test on October 22 was strongly positive. From this time on the patient became rapidly worse and died about one month after operation on November 6.

A post-mortem examination was performed by Dr. Regena Beck and the positive findings are given below.

The *body* is extremely emaciated, the skin appearing deeply tanned and presenting circumscribed areas especially prominent on the arms, legs and

abdomen. These are the healed lesions of herpes gestationis.

The *lungs* are completely filled with hemorrhagic nodular masses of the growth, the gross picture being that of metastatic chorio-epithelioma. Figure 8)

The *liver* is enormously enlarged, the lower edge coming to within two inches of the iliac spine on the right side. It is now filled with metastatic nodules. (Figures 9 and 10)

The *spleen* has several small metastatic nodules but is comparatively normal in shape, size and color.

The remainder of the post-mortem findings are negative insofar as this paper is concerned and are therefore omitted. The microscopic study served only to confirm our gross findings.

CONCLUSIONS

1. A brief discussion of chorio-epithelioma and herpes gestationis is presented.
2. A case combining both of these unusual conditions is herewith reported.
3. In reviewing the literature one other similar case was found.

REFERENCES

1. Davis, Carl Henry: Gynecology and Obstetrics. The Prior Co., 1944.
2. Maun and Green: *Am. Jour. Ob.* **46**:738-743, November, 1943.
3. Hertig and Edmonds: *Arch. Path.* **30**:260, July, 1940.
4. Tuchschmid: *Schweiz Med. Wchnschr.* **73**:1493-1495, December 11, 1943.
5. Elliott, J. A.: *Arch. Dermat. and Syph.* **37**:219, 1938.
6. Rostenberg, A.: *Arch. Dermat. and Syph.* **42**:982, 1940.
7. Weidman, F. D.: *Arch. Dermat. and Syph.* **37**:219, 1938.
8. Mueller, C. W., and Lapp, W. A.: Herpes Gestationis —Report of Two Cases and Survey of Literature, *Am. Jour. Ob. and Gyn.* **48**:170-180, August, 1944.

New Books.

The following books are among those recently received by the Library of the Medical College of Virginia. They are available to our readers, under the usual library rules:

Boyd—The pathology of internal disease.

Clark-Kennedy, A. E.—The art of medicine in relation to the progress of thought.

Felsen—Bacillary dysentery, colitis and enteritis.

Gradwohl—Clinical laboratory methods and diagnosis: a textbook on laboratory procedures with their interpretation.

Harris, Ed.—Vitamins and hormones. v. 111. 1945.

Huff—A manual of medical parasitology.

Jaffe—Men of Science in America.

Ministry of Pensions—Artificial limbs. 1945.

National research council—Inadequate diets and nutritional deficiencies in U. S.

Pulay—Constitutional medicine and endocrinology. v. 1, 1944.

Underwood—A textbook of sterilization.

Williamson—Physician, heal thyself.

Medical Literature for the Veteran Physician.

A special compilation of informative literature on recent developments in endocrinology is being presented to each physician returning from service in the Armed Forces during the War, by the Schering Corporation, of Bloomfield and Union, New Jersey, manufacturers of endocrine, diagnostic and other pharmaceutical preparations. The "Welcome Home" collection supplies information designed to help the military doctor bring himself up-to-date in civilian practice. It contains a copy of "Sex Endocrinology", the illustrated 96-page volume covering the physiology, chemistry and rationale of hormones in modern therapeutics. A "Handy Index" provides in brief outline form for the physician readily accessible and concise summaries on treatment and dosage of endocrine products.

MANAGEMENT OF PSYCHOTIC PATIENTS IN A GENERAL HOSPITAL IN PACIFIC AREA

A Study of 155 Consecutive Admissions

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With technical assistance of
S/SGT. S. D. SHRUT,
and
S/SGT. W. B. STEVENSON

INTRODUCTION

The fruits of war are often revealed as vividly by the shivering or enraged psychotic as by the more obvious physically maimed and dead. In an evaluation of war psychoses, one is involuntarily brought to consider those of the civilian type. A direct comparison of these types, however, would be just as difficult, and as fair, as an appraisal of the similarity of the European and Pacific battle fronts. One is immediately impressed with the age factor in the problem of war psychoses inasmuch as these are of youth and therefore only in incipiency. Because of their youth, it was expected that most patients would show a schizophrenic reaction pattern. Also because of the severe resentment of the schizophrenic to regimentation, the paranoid type was consequently expected to predominate. This was borne out by the statistics, in that 54.8 per cent of the study were schizophrenics and of these one-third were of the paranoid type. (The diagnosis of the schizophrenics was subdivided in the following categories: simple, hebephrenic, catatonic, paranoid, schizoaffective, and schizoid types.)

While civilian psychoses range from the simple to the most complicated (and seemingly most hopeless) of types, the psychoses of the military are relatively minor and consequently give to more favorable prognoses. The diagnostic error, is, however, doubtless greater in the war psychoses. This is to be attributed to the apparently undramatic onset of some of these psychoses, limited time for observation and general mass fear of the soldier evidencing seclusiveness, irritability, inattentiveness, given to conversing in his day-dreams, somniloquences and showing a general picture of impaired efficiency. Faced by such a patient it is the duty of the Army psychiatrist to decide almost at once as to whether or not this is a temporary mental aberration; and, at risk of possible harm by the patient to others or to himself, to determine whether to retain the soldier after short therapy or evacuate for longer treatment and eventual disposition. When there are developments of the hallucinatory and delusional mechanisms, which make the soldier see saints coming out of the treetops one by one and whispering to him, cause him to dive into an inviting pool from his cot and in so doing crack his skull against a tree just outside his tent, or to begin a search for his C. O. and others with a gun, the diagnosis is not at all difficult. The diagnostic difficulty concerns itself with the onset of conditions resembling simple schizophrenias, conversion manifestations or the mild affective psychoses. The soldier who, after long tropical service, becomes emotionally retarded, entertains ideas of self-destruction or portrays the characteristic picture of depression, after dengue, hepatitis and other debilitating diseases, seems to verge closely on the psychotic border and is indeed a problem. The sudden elation and ideas of grandeur occasionally seen in psychoneuroses or the perplexed individual who is entirely without perspective as to the war or his personal problems may well puzzle the examiner. One rarely encounters an organic reaction type not of luetic origin. The alcoholic and toxic psychoses are seldom seen. Strikingly enough, the hysterical reaction, as in hysterical depression, is so deeply rooted that it is almost impossible to differentiate between it and a severe bona-fide depression. It is of interest to observe the considerable number of prison-psychoses and psychoses with psychopathic personality found among prisoners with relatively short confinement sentences. The inadequacies of the above types of individuals become so acute and marginal that they apparently find outlet in those escape mechanisms so typical of true psychoses. The relatively small number of women in the armed forces precludes mental illness characteristic of their sex. Of these one may think of the psychoses of an endogenous nature, the post-puerperal reaction types, the involutional, and general melancholia.

SOME PRECIPITATING FACTORS

The resemblance of war psychoses to those of the civilian types precludes an assumption that military

service in general, and more particularly tropical service, is responsible of itself for causing a mental breakdown. Students of human behavior are well aware of the fact that any trauma, be it sudden blast, exhausting maneuver march, a superior's reprimand, the harrowing fear of combat, jilting by a girl friend, sudden death of a parent, depressing or disturbing mail (whether with or without proper reason), or any other condition that affords a deliverance from the conflicts of warfare so typical of psychoses, may precipitate a full-blown mental aberration in a predisposed individual.

Some precipitating factors, however, deserve brief mentioning. As there are physical allergies, also are there emotional allergies for the potential psychotic. (In a household which has suffered hanging of one of its members, unpredictable consequences may be expected of the request to "hang up a coat".) In the case of the sensitive soldier in foreign service, his behavior may well be likened to that of an acrobat on a tight-rope, balancing himself precariously with a pole. The soldier may likewise attempt to balance himself emotionally, and combats subtle changes productive of possible loss of calm, position and personal safety by using a balancing pole of civilian affections, libidinal fixations, mail call, and generally good military adjustment to equalize the burden of military service. In such an individual, however, this "tight-rope" walking is exceedingly difficult and his inevitable fall (escape from reality) is certain.

Although mental illness is not conceived of as being infectious, the psychic contagion of the military environment is significant. Where people are closely quartered, every emotional disturbance of the person at the particular time is keenly observed and its impingements on both friends and enemies. The news of the death in one serviceman's family, or the changed affection of a supposed fiancee, the news of sudden wealth, as well as a periodic stream of soldier-patient evacuations to the U. S. because of vague somatic or nervous complaints have almost as pronounced a contagious effect on the group as a terrifying cry in the dark. The early childhood and later schoolroom and schoolyard techniques of banter and other forms of ostracisms carry over the adulthood and certainly express themselves in the confines of the military. There, men are apt to call "Speedy" or "Smoky" persons who may be showing signs of introversion; the obese, "Tiny"; "Quiz Kid" for the intelligently curious; and "Queer" to cover many cases, more especially those of sexual aberrations and even of abstinence. The social pressures of the military are not likely to be subtle, and have their effect in either bringing conformity or greatly furthering the social distance between the unfortunate target and his more conforming accusers. This serves not only as a focus of attention but demonstrates the principle of psychic infection both for the individual target and others in the group. Rumor and humor are the prize stallions of military delivery and they may surpass radio in spreading pure gossip or truth fragments with its concomitant effects on the person and organization.

Consequently, in the search for causative factors, we are led to the conditions whereby the individual may first display his psychotic behavior in military uniform. Here it is well to consider that it is no accomplishment on the part of either the inductee or enlistee to slip past the cursory examinations of a rather loose psychiatric net, inevitable in a fast-expanding war machine, by withholding or denying significant information as to his past, along with factors of amnesia, confusion, and their effect on the securing of reliable and complete, though subjective, case histories. It is of interest to note that a distinct effort has been made by some of the patients seen here to conceal evidences of their past breakdown. (The same applies for pure epileptics.) These men in their moments of lucidity are both conscious of and sensitive to their inferiority and ineptness and therefore actually seek military service as an escape channel to rectify past maladjustments. (One can here reflect on the possible basis for that song, "The Army's Made a Man Out of Me".)

The arbitrary standards of "good" and "fair-poor" were chosen for the appraisal of the educational and more embracing social history of the individual patient. "Good" educational background was evaluated from the standpoint of academic attainment exceeding the tenth grade, or its equivalent. Likewise, "good" social background was adjudged on the basis of past happy and efficient adjustment by the soldier-patient to his environment. Though social and educational factors are apparently related, they were evaluated separately. This is rather evident from the statistics where it was again revealed that education was merely a determinant and not the absolute correlate

with satisfactory social adjustment. Because of the very flexible margins of both the "poor" and "fair" as standards of appraisal, these two were combined to better demonstrate the greater contrast between them and the more definitely "good". Thus it was seen from the statistics that the whites seem to have a much higher percentage in the "good" classification of both educational and social background.

The home situation as affected by marital infidelities, separation, death, sib and parental disaffections along with general conflicts, was given attention. Though other seemingly important social features such as religion, marital status, occupation, arrests, and deleterious habits were considered, these were found, as anticipated, not to be pivotal in affecting to any marked extent the precipitation of a psychosis.

While 75.5 per cent of the total group revealed "fair-poor" social (or environmental) backgrounds, the figures for the negro were somewhat higher at 86.4 per cent than for the whites at 68.9 per cent; 23.7 per cent of the negro group and 59.4 per cent for the whites with an average of 45.8 per cent evidenced "good" educational background.

Evaluation of Findings

The statistical analysis discloses a relatively slight variation in the age of mental collapse occurrence in negro and white soldiers. The breakdown onset for the negro soldier is 24 years 10 months; and 24 years 2 months for the white, thus averaging 24 years 5 months for the total group.

The total average length of military service is approximately 25.8 months, with an average length of tropical service for the entire study at 13.8 months, thus indicating that at least one-half the service time was spent overseas. It was shown that tropical endurance was somewhat higher for the white soldier by several months, but here again the factor of negro troop allocations seems to enter and to counsel against definite assertions. The combat statistics for negro and white approximate each other to two (2%) per cent; 45.8 per cent of the total group had experienced combat.

Rank, ranging from that of Pfc to Captain was evidenced in 40.7 per cent of the total study, and furnished additional interest to the study but proved of doubtful significance inasmuch as the factor of demotion was found to have asserted itself either in the past or just prior to hospitalization, possibly because of misguided attitudes. In this study, 4 per cent of patients seen had served or were serving time for court martial offenses prior to hospitalization.

The physical appearances of the psychotic patients, which according to some authorities is considered to correlate with certain types of mental aberrations, was not distinctive in this study. The patients ranged in bodily habitus to as marked an extent, regardless of diagnosis, as that of any group of men seen on a dance floor. From those mentally retarded these patients ranged to those of superior intelligence, voicing impressions and opinions of considerable thought-content. A case in point was that of one patient who quoted poetry fluently and logically discussed the philosophy of Plato and others, and the glory of the ancient world, with sound implications for that of the present. There were some with marked abilities in the field of art, some with unusual mechanical dexterity, others with generally superior abilities and comprehension, along with some rather bizarre inventive schemes. Here comes to mind one patient's plan, actually proposed to several generals, for a giant landing craft with caterpillar treads and bristling with 155 m.m. and other large guns to carry an entire invasion party over water and then to proceed over enemy land bastions with uninterrupted speed and fury. The range of civilian occupations among these patients was dispersed from stooge, racketeer, professional dancer, skilled technicians, salesmen, to a medical officer. In the Army these men were employed in positions ranging from labor details, signal tower operator, other positions of responsibility, to combat leadership with its decisions for life and death.

Despite the fact that Army psychiatry is relatively simple, frequently involving itself with hospital recidivists, there often appear some of the rarer syndromes. In a case of paranoia, the college-educated patient was very much occupied with all manner of systematized delusions ranging from stealer evolution to composition of the human family group, the growth of hair, and prediction of mosquito reproduction over certain time periods, all with an expressed relativity, and with the self-alleged intent of evoking some changes through his dormant but superior powers as one of the world's great scientific benefactors. Folie a deux was seen in an officer and an enlisted man with the severe depressions precipitated by the fatal ambushing and torture of

their mutual friend. This psychiatric rarity was even more interesting inasmuch as the patients were not acquainted before hospitalization and in that both showed marked improvement in their condition after their mutual stuporous mutism and severe confusion.

As expected, the hostilities shade the psychoses. Here it is well to observe the racial antagonisms. Individuals belonging to minorities would synthesize their racial sensitivities so acutely that very often a definite minority psychosis was expressed. This was more evident among negroes than in whites. Of special interest are such individuals as the mulatto, the newly arrived immigrant, the person of foreign birth, or the semi-assimilated members of our society who may still feel the chill and fever of the residual minority oppressions and whose psychoses may be said to approximate those of "marginal man". For example, the case of the young Chinese recently emigrated to the U. S. A. and shortly thereafter ushered into a realistic and, to him disorienting war machine who evidenced ambivalence between Chinese ritualistic dances and postures and muttered affirmations of being an American; that of the very evident social malaise of the keenly sensitive foreign-born American and his seemingly perpetual seclusiveness; the general distrust of the Navajo Indian patient whose paranoid trends regarding the white man were carried over to suspicion and antagonism for ward procedures, from simple medication to custody of his personal belongings; and, more markedly, the cases of several mulatto patients whose racial marginality was expressed in repeated fights and other compulsions with both negro and white. Also as evidenced by the expressions of the entire group, the resentment was greater for the Army than for personnel, possibly indicative of fairness and generally good effort to attain sympathetic understanding by military authorities. The degree of regression in many patients approached that of the suicidal border. Although many had harbored thought of self-destruction, only a few vain attempts were made.

The Dream Life of the Psychotic

The dream life of the various nations goes back to pre-Biblical days and has been elaborated on extensively by writers from Aristotle and others to the present-day purveyors of "dream books". That dreams have real significance in everyday behavior is evidenced by the common curse among some peoples for their enemies to have "bad dreams" or to have their own vexing dreams changed to benign. Oneiroscopic history touches upon some of the world's foremost figures and events from the Biblical famine foretold in a dream (and consequently regulated) through to the many contributions to art, science, literature as an aftermath of dreams, and is seen demonstrated frequently by the dramatic technique of portrayal in retrospect. And so dreams figure somewhat in diagnosis and therapy.

As in the "normal" individual, the dream of the psychotic is likewise compatible with his type of mentation. The harrowing sensation of being pinned against a brick wall by a Nazi taxicab over having "Bronx-cheered" der Fuehrer in a Wilhelmstrasse theatre was a dream of a normal antifascist. The dream of being interrupted in coitus with his wife by male onlookers who also poured cold water on their genitalia was that of an individual disturbed by the sudden loss of his wife's affections, a loss symbolized by this revealing dream.

In the psychotic, regression from reality is frequently disclosed by dreams. The problem of sex, so poorly managed by the schizoid individual, is quite prevalent in the dream state and represents the chief type of dream for the study. The symbolism of these dreams is vividly illustrated in the presence of snakes, mountains, valleys, flying or hovering, strange landscapes seen before. There is the recently observed example of a dream of fifteen (15) years' persistence in which the person sees himself walking alongside a white picket-fence and then falling into a manhole, with others falling on him and smothering him. The interpretation of the picket-fence as well as of other pointed objects is clearly explained by students of Freud. The magnitude of the environment and the feebleness of the simple schizophrenic is well illustrated in the dream, of long history, wherein the person stands at the end of a smooth asphalt road, sees a ball start rolling towards him getting larger and larger and then watches both ball and road crumble just a short distance from him, leaving him either to awaken in a cold sweat or to experience this spectacle one or more times again in the course of the same night. A manic's dream is exemplified by the supporting of great weights in one hand as he swings, in the best Tarzanic tradition, from treetop to treetop. In those patients who have experienced combat, dreams

are augmented by terror sensations, as when the person sees the river turning to blood and his drowning therein, or sees tombstones, one bearing his own name.

General Considerations—Prevention

Since the origin and cause of mental illness still remain unsolved mysteries in medicine, one can speak only of relative prophylaxis. One means is to prevent the induction or enlistment of the potential psychotic. While this is an exceedingly difficult task, wide vigilance should be instituted not only from the standpoint of sound military economics but more basically for the prevention of individual mental breakdown and its concomitant personal tragedy. Every exacerbation, even of a physical nature, is hardly beneficial for a patient already sensitized to a given disease, not to mention mental sensitivity in which the emotional trigger is always fixed for discharge. Particular care must be undertaken at induction centers to obtain good social histories and to afford better psychiatric appraisal through more thorough examination. The psychiatric net, though severely stretched by the mass of cases, can well be repaired. Furthermore, a more understanding attitude on the part of line officers, so frequently accustomed to behavior interpretation from an "AR" point of view, may well prevent many a breakdown. When in doubt, a psychiatrist should be allowed to decide as to whether the soldier is deserving of punishment, and, if so, whether confinement should be in a stockade or hospital. Another measure of prevention goes beyond the induction center and concerns itself with the possible education of "people back home" in writing to their servicemen. In addition to the factor of infrequent mail, there is the steady stream of sobbing mail with its irrelevant and depressing details, not to mention the possible misconstruing of even a single sentence—and its most profound possibilities in causing the soldier to begin his slide towards a mental aberration. This factor is frequently mentioned by the unfortunate soldier beset with mental illness.

Therapy

The old concept of Father Time as the greatest healer holds as true of psychiatry as of other branches in medicine. Although not of itself the complete curative agency, yet time is distinct in affording opportunity for the patient to untangle himself emotionally, and, consequently, become more amenable to therapy. Also of importance is the hospital environment of the newly-arrived, bewildered, agitated, and frequently restrained patient. This new environment must not only have the necessary physical comforts but must also possess the kindly understanding on the part of personnel that such patients are truly sick, and that the mental aberration, which at times is temporary, betokens illness as much as the visible physical wound.

This hospital's closed psychiatric section consists of three buildings; one for the violent, with individual locked and reinforced rooms; one for the moderate psychotics with individual rooms which are neither reinforced nor locked; and a third, a regulation open ward structure with one front door which, of course, may be locked. The first two wards are not enclosed in a stockade, but have an adjoining fenced volley-ball court, play yard, and a garden. In each of these wards there is also a centrally located day room with its reading and writing facilities and opportunities for indoor games, its ping-pong table, and a phonograph. For benefit of discussion we shall call the wards, E, F, and G.

Upon arrival, the patient is admitted to Ward E, where he is subjected to the usual admission routing of a short and informal meeting with the ward officer, along with good food, medication, and a rest. After almost immediate and hasty perusal of the history, the patient is informed that better accommodations are available subject to his good behavior, with the basic understanding that his present address is in no way to be considered as punishment. This original interview is closely followed by understanding attention on the part of ward personnel. The daily schedule of activities, supervised and actively participated in by nurses and corpsmen range from routine patient care to assignment on simple details, participation in volley-ball or ping-pong or other games, and visits to the movies. If progress permits the patient is transferred within a couple of days to the less restricted Wards F or G.

Although everything is carried on in an informal and friendly manner while the patient is still seemingly in his mental twilight, the atmosphere of an Army hospital is still sustained. While his needs are being satisfied in the early stages, his responsibility mounts upon transfer to the less restricted Wards F and G, where his treatment approximates that of the average hospital patient. Despite popu-

lar misconceptions as to behavior of psychotic patients, there was generally wholehearted cooperation with ward details, landscaping, and many another chore so readily accepted by practically all the patients.

Concerning medications, the rule was generally to give as few hypnotics and narcotics as possible. The former were rarely given in daytime, the latter only when the patient exhibited violence or on the day of evacuation. It is here worthy of note that because of this general management of the patient, not once was it necessary to restrain a patient of this series by the time of his evacuation. (The average period of hospitalization was about 1 month.) With the beginning of electroshock therapy, management of patients was greatly simplified and restraints modified. Wet packs or continuous bath treatment were not resorted to with the general result that the closed section differed little from the open wards. In a rather large group (about one-third of the total study) treated with electroshock and given an average of about five treatments (some receiving ten treatments and a few only one treatment), some heartening results were obtained. There were several cases of almost complete restoration of normal mental functions with just one treatment, closely followed by psychotherapy, while seventy-four per cent (74%) treated with this effective and seemingly dramatic form of therapy showed progress from definite improvement to virtually complete recovery. Reassuring advice and psychiatric bolstering for the patient who was afraid or showed other evidence for their need were other therapeutic devices of great importance. One patient felt greatly relieved to be able to hand to the examiner a long list of names (41) and addresses of enemies, with the certainty that these would torment him no further. Some work in group therapy was also attempted and showed promise of benefit for the milder and more accessible psychotics. This device made possible some re-orientation and education of the total group, possibly giving to each patient the conception that what had happened to him had also happened to others; and that his problems were similar to those of others. This subtle invitation to understanding furthered mutual sociability and discussion.

The patient's time was utilized to seemingly good advantage by the considered scheduling of the day's activities. Patients became quite proficient in ping-pong, volley-ball and other games. (One catatonic responded only to close order drill.) In general, ward details, gardening, and landscaping were benefited as they in turn seemed to benefit the patient. Best results were achieved, as expected, in craft work of a mild competitive nature. Informal musical therapy was also attempted and was of general appeal to the patients. General improvement by the time of evacuation was noted in 67.7 per cent of the negro patients, 57.3 per cent of the white patients, and 61.3 per cent of the total patients studied.

The above bears out to some extent the generally accepted opinion that among primitive races, the psychoses are of a less complicated nature, thus, also, the higher percentage of recovery.

SUMMARY

A review of the case histories leads to the view that predisposition to mental illness in civilian life may well eventuate in breakdown in the more rigorous military environment, and probably at an accelerated rate. However, the prognosis for these patients is much more favorable than for those of civilian life because of such factors as incipiency, generally good physical condition of the patient, along with prompt medical attention and supervision.

In contrast to the view that mental patients are "poor protoplasm" it is well to consider that many soldiers with psychotic episodes or illness have volunteered for military duty, possibly out of mixed patriotism and opportunism. Most of these soldiers had good records. Almost one-half (45.9 per cent) of the group were with combat experience; had spent on an average more than 25 months in the service and more than 13 months in foreign service with its rigors and tensions and seemingly small prospect of resumption of longed-for civilian life. Also, that 40 per cent held some rank is generally indicative of their worth. Once hospitalized and properly treated, these persons proved themselves ideal patients and almost invariably expressed desire for return to duty. In contrast to some slight effort on the part of some psychoneurotics to escape military duty, the malingering factor in the psychotics was practically negligible.

The dream life of the psychotic patient afforded further insight into the mental aberration, with which it evidenced compatibility. An escapee from reality or flight into the outer sphere is sought dur-

ing the waking state, so this same type of mentation is continued in the dream life. Among those who have experienced combat, terror and battle dreams seemed to predominate. In the schizophrenic, the sexual symbolism was almost invariably present. These dreams worried the patient a great deal, were often volunteered by the patient for interpretation and diagnostic aid; yet, with an adjustment to hospital routine, they failed to unduly distract him.

It was indicated that a restricted administering of narcotics and hypnotics, along with a properly scheduled complete day of wholesome activity, and rather thoughtful and individualized treatment of patients by capable personnel produced marked therapeutic results.

CONCLUSIONS

1. The stress of military life is not entirely responsible for mental collapse.

2. The seeming inevitability of psychotic breakdown is contrasted with the preventability of some psychoneuroses.

3. The fair-poor social background of 75.5 per cent of the study group seems of greater importance than even the detrimental hereditary factors evidence in 57.4 per cent of the total group. The educational background, however, seemed to be of little importance since almost half (45.8 per cent) even had a "good one".

4. True organic psychoses represented less than 2 per cent of the group studied. (It was further considered that 16.1 per cent of the patients studied gave past history of malaria and of dengue which may be considered as coincidental.)

5. Over one-half (54.8 per cent) of the patients were schizophrenics and one-third of these were of the paranoid type, while in the affected reaction types the depressive was observed to predominate.

6. There was a marked predominance of psychotic trends with the C.P.S. plus a relatively high percentage (4 per cent) among these patients of military punishment and stockade confinement.

7. The great value of electro-shock therapy was emphasized for selected cases as both a management aid and as a therapeutic agent.

8. Attention was directed to the relative ease of mental patient management with adequate facilities and proper understanding of the person who suffered breakdown.

9. A more favorable prognosis was noted for psychoses in the Army than for those of civilian life.

Floral Eponym (39)

FUCHSIA

LEONARD FUCHS, 1501-1566

Fuchs graduated M.A. at Igolstadt in 1521 and M.D. in 1524. After practicing 10 years in Munich he accepted a professorship at Igolstadt. In 1528 he resigned this to become the chief physician to the Margrave of Anspach. In 1535 he accepted the chair of medicine at Tübingen, which he retained until he died. He was a fervid Hippocratist, but is better known as a botanist. His *De Historia Stirpium* (Basel, 1542) is beautifully illustrated. His name was given by Plumier to the genus *Fuchsia.*

Fuchsia is a genus of the family Onagraceae. Most of them are natives of Central and South America, a few are found in New Zealand. They vary in size from potted plants to small trees. *F. excorticata* of New Zealand grows to 30 or 40 feet in height. Fuchsias are among the most ornamental of the cool greenhouse flowering plants. They may also be used in summer as bedding plants, and they are among the very few flowering plants that will bloom in the shade. They were extremely popular in the past century, and at present are regaining their popularity.

SPOROTRICHOSIS—REPORT OF A CASE IN VIRGINIA*

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The first case of sporotrichosis seen at the University Hospital with the probable source of infection in Virginia was admitted on January 24, 1945. A survey of the literature reveals that only one other similar infection has been reported from the State. That the occurrence of sporotrichosis is relatively rare in this section is suggested by the paucity of reports from Virginia, West Virginia and North Carolina. There have been no case studies available from South Carolina. See Table No. 1.

Sporotrichosis is a chronic infection caused by the fungus, Sporotrichum schencki, first carefully described in this country by Schenck in 1898. The geographic distribution in the United States is widespread, with the preponderance of cases reported from the Mississippi and Missouri valleys.

Several classifications of the clinical types have been offered, the most important of these depending on the work of de Beurmann and Gaugerot. In general, the various forms are:

1. The localized lymphatic type which may be associated with the sporotrichotic chancre.
2. An epidermal type—ulcerative or non-ulcerative in character.
3. The extracutaneous forms involving mucous membranes, the skeletal system or visceral sites.
4. The disseminated type, rarely seen in the United States.

Differential diagnosis includes the chronic granulomas, particularly syphilis, tuberculosis, drug eruptions and pyogenic infections. In this locality, tularemia of the cutaneous type must be eliminated. In the latter, although a primary lesion and nodular lymphangitis may appear, satellite lymphadenopathy and a definite systemic reaction are prominent features.

The diagnosis depends on cultural studies, using Sabouraud's glucose agar and blood agar, since the organism is rarely demonstrated in fresh preparations from the lesions. Histologic examination is usually non-specific. Intracutaneous tests with sporotrichin may be of value in the establishment of a diagnosis; agglutination tests may elicit a positive reaction but technical difficulties have obviated their general use.

Mrs. E. T., a white housewife, age 58, a resident of Louisa County, Virginia, was admitted on January 24, 1945. The patient had been referred by her local physician for the diagnosis of indolent ulcers and nodules of the left hand and arm, present for approximately one month. About December 15, 1944, a small "pimple" had appeared on the fourth finger of the left hand. This lesion had in-

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creased in size and had ulcerated within one week. Several small, red nodules were then noted over the dorsum of the hand followed by a progression to the extensor surface of the forearm and the medial surface of the arm. Several of the lesions had ulcerated during the fourteen day period prior to admission.

Approximately one week after the lesion had appeared a doctor was consulted and a paste was applied locally without improvement and with extension in the findings. One week later the patient was seen by another physician who drew serum for agglutination tests with B. tularense with negative findings. Treatment had consisted of antiseptic compresses and later sulfanilamide powder which produced a dermatitis; the patient also was given sulfathiazole by mouth. There was marked tenderness of the lesions as well as an associated pruritus which had appeared only after the development of the sulfonamide dermatitis.

The patient stated that she had not been out of rural Virginia for several years. In addition to her household duties, she worked in a country store and in a garden, where she had recently handled straw while mulching rosebeds.

The remainder of the history was non-contributory.

The patient showed no evidence of an acute illness. The temperature was 98.4 F. The pertinent findings were referable only to the skin lesions. On the dorsal surface of the proximal phalanx of the fourth finger of the left hand was an indurated granulating ulcer (9.5 x 2 cm.) with irregular edges discharging a viscid, grayish-yellow pus. An area of erythema and crusting surrounded the lesion and the entire finger appeared edematous. Subcutaneous nodules varying from 0.5 to 1.5 cm. in diameter appeared just distal to the wrist on the dorsum of the hand and extended in a chain on the extensor surface of the forearm, and radially to the medial surface of the arm within 9 cm. from axilla. Ulceration had appeared in the older lesions and was noted more frequently on the hand and forearm. Several nodules were fluctuant and from these thick gray-green pus could be aspirated. On the upper arm there was less evidence of fluctuation, the majority of lesions remaining firm. (See Figures 1, 2, and 3.) There were no palpable epitrochlear or axillary lymph nodes.

The Wassermann and Kahn reactions of the blood were negative; a urinalysis was normal; a blood count revealed 12.5 gm. hemoglobin, 4,040,000 erythrocytes, 5,200 leukocytes with a normal differential smear. The sedimentation rate was 30 mm. in sixty minutes. Agglutinations with B. tularense were negative. An intracutaneous test with tuberculin in a dilution of 1:1000 was negative in 48 and 72 hours. A roentgenogram of the chest was normal.

The following studies were reported on the cutaneous lesions:

Direct smears from the ulcer on the finger revealed occasional gram positive cocci in pairs and chains; cultures demonstrated only staphyloccocus aureus hemolyticus and micrococci. Under sterile conditions pus was aspirated from a subcutaneous nodule above the left elbow on the medial surface of the arm. Direct smears revealed no fungi or bacteria. Sabouraud's glucose agar was inoculated with this material on 1/24/45. On 1/29 white, moist yeast-like and flat hyphal growths were present. On examination through the flask at low power a filamentous fungus producing small blastospores was observed. On January 31 the color of the culture was changing to brownish black and on February 3 the entire growth had assumed this pigmentation, the surface appearing convoluted and membranous.

Slide cultures revealed delicate hyphae showing spindle-shaped, elliptical, ovoid and round conidia at the ends of the lateral branches supported on conidiophores, identified as S. schenki.

Histologic examination of lesion from the forearm showed that the epidermis was intact. A considerable increase in the collagen fibers and capillaries of the papillary bodies was present. The upper portion of the corium was replaced by a subacute granulomatous inflammatory reaction, consisting of many tiny accumulations of polymorphonuclear leukocytes which were undergoing disintegration. These were surrounded by a zone of mononuclear cells many of which were elongated, producing the structure of epitheloid cells. Capillaries and small amounts of hemorrhage were seen in these areas. Peripheral to the zone of epitheloid cells was granulation tissue which formed a large part of an inflammatory mass, consisting of capillaries resting in a mesh work of connective tissue cells and infiltrating neutrophiles, mononuclears, lymphocytes and plasma cells. No organisms were demonstrated in the sections.

During the period of hospitalization, the patient continued to complain of moderate pain in her arm and hand. She felt well generally, however, and her course was essentially afebrile. Local treatment consisted of 5 per cent ammoniated mercury ointment. On January 30 a daily oral dosage of 6 grams of potassium iodide was prescribed and the patient was discharged two days later with little change in her status.

On February 14 a 50 per cent regression of the lesions had occurred and at this time the potassium iodide dosage was increased to 12 grams daily. On March 14, complete healing had occurred except for mild induration at the sites of former activity. Iodides had been discontinued one week previously because of a mild gastrointestinal reaction. The patient was advised to resume a dosage of 3 grams daily and referred to her physician for continued observation.

TABLE No. 1

REFERENCE	AGE	SEX	COLOR	OCCUPATION	POSSIBLE SOURCE	DURATION	TYPE	LOCATION	LABORATORY STUDIES
VIRGINIA									
Shaw, F. W., and Kimbrough, R. D.: *Va. Med. Monthly* **58**:384, September, 1931	22	F	C	Housewife	mosquito bite	2 months	Lymphatic	Left arm	Cultures positive STS positive
WEST VIRGINIA									
Wade, J. L., and Matthews, A. R. K.: *Arch. of Int. Med.* **61**:916, June, 1938.	20	F	W	Housewife	trauma?	14 months	Epidermal and Mastitis	Right & left Breasts	Smear doubtful; cultures positive; STS negative
NORTH CAROLINA									
Fogd, D. H., and Martin, D. W. *J. of Ped.* **17**:193, August, 1940	7	F	W	Student	contact with dead rat	3 weeks	Lymphatic	Left hand & arm	Cultures positive; Biopsy "chronic and acute inflammatory in type." STS negative.
Noojin, R. O., and Calloway, J. L.: *Arch. D. & S.* **49**:305, May, 1944	36	F	C	Housewife	not determined	5 weeks	Lymphatic	Face & Neck	Cultures positive; Biopsy "chronic inflammatory reaction." STS negative
	13	F	W	Student	Exposure to shrubbery	2 months	Epidermal	Lower left leg	Cultures positive STS negative
	14	M	W	Farmer	trauma	2 months	Lymphatic	Left hand & leg	Cultures positive; Biopsy "no evidence of causative org." STS negative
	38	M	W	Farmer	not determined	3 months	Lymphatic	Left hand & arm	Cultures positive; Biopsy "no fungi"; STS negative
	11	F	W	Student	Scratch on thumb picking cotton	2 months	Lymphatic	Left hand & arm	Cultures positive; Biopsy: "no definite fungi." STS negative

BIBLIOGRAPHY

1. Conant, N. F., Martin, D. S., Smith, D. T., Baker, R. D., and Calloway, J. L.: Manual of Clinical Mycology, W. B. Saunders Co. 1945.
2. De Beurmann, L., and Gougerot, H.: Les Sporotrichoses. Libraire Felix Alcan, Paris, 1912.
3. Fogel, David H., and Martin, David W.: Sporotrichosis, *J. Pediatrics* **17**:193 (August), 1940.
4. Lewis, G. M., and Hopper, M. E.: An Introduction to Medical Mycology. Year Book Publishers, 1943.
5. Noojin, Ray O., and Calloway, J. Lamar: Effectiveness in Vitro of Sulfonamide Compounds on Sporotrichum Schencki, *Arch. Dermat. and Syph.* **49**:305 (May) 1944.
6. Shaw, Frederick W., and Kimbrough, Raymond: Sporotrichosis—Report of a Case in Virginia, *Va. Med. Monthly* **58**:384 (September), 1931.
7. Schenck, B. R.: On Refractory Subcutaneous Abscesses Caused by a Fungus Possibly Related to the Sporotricha. *Bull. Johns Hopkins Hosp.* **9**:286, 1898.

Ciba Paintings on Exhibit.

A tribute to the medical profession is "The Seven Ages of a Physician," a series of seven paintings by the contemporary artist James Chapin, which will be on exhibit at the American Medical Association Convention in San Francisco, June 28 to July 7.

The display will be held in the San Francisco Museum of Art in the War Memorial Building, where many of the convention meetings will take place.

Mr. Chapin, who holds an enviable position among the leaders in American art, was commissioned by Ciba Pharmaceutical Products, Inc., to paint the series, which paraphrases Shakespeare's seven ages of man. Works by Chapin are included in the collections of outstanding museums throughout the country as well as in the private collections of many famous art lovers.

First in the series is "The Doctor's Son," showing an infant child attempting to reach for his father's stethoscope; the second, "The Dying Hare —A Boy's Dedication to Healing," vividly portrays a youth overcome with remorse at having wounded a hare and filled with a desire to make whole the creature which he destroyed. And so—the wish becomes a resolve and dedication.

The third painting entitled "Medical Education —The Bedside Lecture," depicts for a group of medical students the relationship between doctor and patient. The fourth, "The Doctor," illustrates the role of the doctor as an arbiter of birth, healer of the sick and maimed and comforter of the aged.

"The Doctor in War" is next in the series. This was composed with some of the earlier religious pictures, the "Pietas", in mind. The doctor and nurse are seen as ministering angels, inclining above a suffering figure in the foreground. The desperately wounded worker, whose posture suggests crucifixion, is supported by both a white and a negro soldier, symbolic of the fact that in the realm of medicine as in true religion no racial barriers are recognized.

Following this is "Research Heroic—The Self-Inoculation." The picture conveys the heroism of numerous doctors, who, unwilling to endanger others, have experimented on themselves in their search for new serums to prevent or cure disease.

The last painting, "Doctor's Heritage," is an effective study of an elderly physician and a student doctor, seated at a table on which lie a book, skull, globe and test-tube—symbols of knowledge, the endless battle against death, the World as province and the future of medicine.

CERTAIN FACTORS TO BE CONSIDERED IN THE SURGICAL THYROID

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The cause of hyperthyroidism is hyperplasia. The thyroid gland is firm in hyperthyroidism. If the gland is not firm on palpation, the patient does not have hyperthyroidism. To palpate the thyroid, the larynx is pushed over with one hand and with the other palpating hand, one finger is placed in back of and one in front of sternomastoid as the patient swallows. The thyroid gland being displaced can be felt as it goes up and down.

INDICATIONS FOR THYROIDECTOMY

1. Primary thyrotoxicosis, as result of exophthalmic goitre or primary Graves' disease, and toxic adenoma.
2. Secondary thyrotoxicosis, as result of previous goitre usually occurring in younger subjects, or toxic adenoma.
3. Non-toxic adenomatous nodule, potentially malignant.
4. Aberrant thyroids potentially malignant. Lingual thyroid occurs in this class and is characterized by central swelling at back of tongue. Masses running along sternomastoid muscle should be removed and treated with irradiation.
5. Colloid goitre, particularly indicated for pressure and also for cosmetic reasons. A small percentage may become toxic.
6. Riedel's disease, a rare condition characterized by hard smooth mass producing symptoms by pressure of the enlarged thyroid gland.
7. Certain types of heart disease: Total thyroidectomy in these cases causes a markedly subnormal basal metabolism, thereby decreasing the load on the heart.

OPTIMUM TIME FOR THYROIDECTOMY

The most important single factor in determining the optimum time for thyroidectomy is an increase in body weight of the patient. The basal metabolism must be reduced to normal. If you operate with metabolism, more than + 20 the effect will be bad. It is not wise to operate on a patient who fails to gain weight or is losing weight, when the patient is emotionally unstable, when the patient has vomiting or diarrhea, when there is any increased severity of symptoms, or following acute infection. Cardiac decompensation should be properly prepared. Changes in blood calcium should be corrected by proper diet, giving calcium orally and intravenously, vitamins, thiouracil and iodine.

THIOURACIL AND LUGOL'S SOLUTION

Thiouracil has its greatest usefulness in the patient who is seriously ill with thyrotoxicosis. If iodine alone is used to prepare this type of operation, the mortality may be high. Iodine is contraindicated in the tuberculous patient. According to Dr. Frank Lahey, out of 1,000 operations a year on goitre, 100 to 125 will require thiouracil. If the patient does not require multiple stage operation and is in no danger of dying, she can be prepared with Lugol's solution in a week and can leave the hospital in another week.

The administration of thiouracil takes time and is risky. It requires close observation, but it has definite place in preoperative preparation of the surgical thyroid. Thiouracil will bring the metabolism to normal, but the histological picture is that of hyperthyroidism, for the hyperplasia remains. It is therefore difficult to perform an operation on thiouracil alone, because of the friability of the thyroid gland. Thiouracil exerts an extra-thyroid effect, while Lugol's solution is intra-thyroid. Iodine acts by depositing itself in the acini, compressing them and causing the cells to flatten. Thiouracil decreases the synthesis of thyroxine. It does something to inorganic iodine, making it not useful in the thyroid for the manufacture of thyroxine. As a result, the amount of iodine circulating in the blood is decreased and the metabolism comes down.

With the administration of thiouracil the time of operation is approximately as many days as the number of degrees the metabolism is above normal to bring the metabolism to normal. In a patient with metabolism of + 56, it will take 8 weeks to bring that to normal. In such a case give thiouracil for 7 weeks, but the last week no thiouracil, and for the last 10 to 21 days give Lugol's solution t.i.d. daily. This combination produces the good effects

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of both thiouracil and iodine.

The administration of iodine is followed by involution of the thyroid gland and decrease in size. The gland, instead of being friable and vascular, becomes pale and firm. Iodine is effective in toxic goitre and less effective in toxic adenoma. Thiouracil is effective in either. One must bear in mind that a non-toxic adenoma may be converted into a toxic goitre by administration of iodine. Iodine will never cause the basal metabolism to become subnormal. Thiouracil may result in myxedema. Some, therefore, believe that it may become the answer to hyperthyroidism.

Thiouracil may cause sensitization reactions, such as fever, chills, edema, swollen salivary glands, nausea, joint pains, skin eruptions, thrombocytopenia and agranulocytosis. Giving thiouracil for a while, ceasing to use it and then re-administering it, will greatly increase the sensitization complications that go with it. Every patient who takes thiouracil must have a weekly white blood count. The best single agent to combat agranulocytosis or other sensitization manifestation of thiouracil is penicillin.

COMPLICATIONS FOLLOWING THYROIDECTOMY

Parathyroid Tetany:—With removal of parathyroids the patient will develop parathyroid tetany from 12 to 18 hours post-operative. She will have carpopedal spasm within 12 hours. Treatment consists of giving calcium gluconate or chloride intravenously (the latter working almost immediately) and 2 c.c. parathormone. Since it takes ½ hour for parathormone to work, it should be given simultaneously with calcium intravenously. This is followed by ingestion of hitacherol, ten drops t.i.d., with dilute hydrochloric acid and calcium lactate. The acid makes the calcium more easily taken up. Once controlled, the dose of hitacherol, because of its expense, can be cut down to 2 to 4 drops a day. Parathyroid deficiency may come on late, causing stiffness of fingers at menstrual periods. The blood supply of the parathyroids being cut off by scar tissue is the cause of the delay in onset.

Post-Operative Hemorrhage:—When post-operative hemorrhage is visible on dressings, it is not dangerous, for it will be easily detected rather early. When post-operative hemorrhage is hidden, it is dangerous, for it isn't detected until complicating symptoms develop. It will cause obstruction to breathing and may cause death due to asphyxia. Not being able to deploy itself, the pressure under the deep cervical fascia becomes tense and small veins of the neck become compressed, causing edema and dysphagia. Edema of the larynx will cause edema of the vocal cords and may cause death due to inability of air to get into the lungs. It takes several hours for this condition to occur. The patient is restless and tries to sit up in bed. If this condition is missed and patient given morphine, his respirations may be further embarrassed. The first sign of this hidden hemorrhage, subsequent pressure and edema, is dusky cyanosis of face. This is accompanied or followed by sitting up in bed and using muscles of respiration and labored respiration. The immediate treatment is to get an airway down the larynx, to be followed by removal of the clot and stopping the bleeding.

Recurrent Laryngeal Paralysis:—If unilateral recurrent laryngeal paralysis is due to injury to the nerve, the patient will usually be hoarse as long as he lives. However, sometimes the other cord will hypertrophy and meet the paralyzed cord and thus relieve the hoarseness. If bilateral, the condition may be fatal because edema of both cords will not allow patient to breathe. The immediate treatment for this latter condition is intratracheal intubation and tracheotomy. Later on the aretynoid cartilages can be resected or a non-absorbable suture tied around each vocal cord and each cord pulled out.

Thyroid Crisis:—The etiology of thyroid crisis is unknown. It is seen in people inadequately prepared. Not all people are candidates for subtotal thyroidectomy in one stage. To avoid thyroid crisis, select the patient, time of operation and safe amount of surgery. Some patients are iodine fast or iodine resistant. In these patients there is a definite place for graded operation, tying off poles and hemi-resection. The patient with thyroid crisis does not respond to treatment and is 100 per cent fatal, but the patient with thyroid storm responds and gets well, for he will react to iodine. The treatment of patients with thyroid storm and also crisis is to pack the patient with ice, intravenous and subcutaneous glucose, iodine, fluids and adrenal cortex.

Medical Arts Building.

FOREIGN BODIES IN THE VAGINA*

RANDOLPH H. HOGE, M.D.,
Richmond, Virginia.

A few years ago a median sagittal section of the head of a cadaver was made in the anatomy laboratory at the Medical College of Virginia. There was a large perforation of the nasal septum. Lying partly in this perforation was a thin, tarnished dime and a rubber inner tube patch. The corpse had come from an asylum for the insane. We who viewed the dissection did not know the explanation of the presence of these foreign bodies. However, medical practice and medical literature contain many instances of foreign bodies placed wilfully or otherwise in those body cavities opening upon the surface. Thus, there are cases of foreign objects in the nose, ears, bladder, rectum, and vagina. It is with bodies from extraneous sources found in the latter location that this paper is concerned.

The literature contains reports of cases in each of which one of the objects listed as follows was found in an infantile or juvenile vagina: a metal container of crystals of potassium permanganate; an empty shell; hair pins; a stick; and "ear of grain"; a paddy grain; a straight pin; safety pins; the shell of a hazelnut; a cork; a wad of paper; a mass of calcium oxalate crystals, 6 centimeters in length and weighing 25 grams; a "forked branch of cherry"; a "piece of straw rolled up"; and a leech. One vagina was a veritable museum. It contained two cherry stones, two pebbles, two splinters of wood, some scraps of coal, and other foreign bodies. The latter case was only a runner-up to the following:

The collector and custodian in this case was a feeble-minded, colored pseudohermaphrodite, aged 23 years, who had on two occasions this remarkable collection: a hexagonal-shaped nut 1 centimeter in diameter, six shoe buttons, two rubber balls, the cap of a tooth paste tube, and a small cork. In another somewhat similar case the vagina of a 27 year old feeble-minded woman contained thirteen safety pins, three pieces of cotton, a large screw, and a large piece of coal.

Also reported are additional cases in which the vaginas contained the following: more buttons; hair pins; safety pins; a cylindrical tin box, 1¾ inches long and above 1 inch in diameter; pieces of cotton; a bottle 4½ inches in length; a sandstone 1¼ inches long and ¾ inch wide; a bael fruit, 3 inches in diameter; and a piece of ox tongue, 7 x 4½ x 2 centimeters. The titles of two Italian papers, unavailable to me, indicated that there were two more cases in which leeches were found in the vagina.

I recall, I think, two specimens which were in the Harvard Medical School museum when I was a medical student. They had been removed from vaginas. One was a large Irish potato and the other a ligamentum nuchae of an ox.

I once examined a negro woman who turned out to have carcinoma of the cervix. Her vagina was packed full of mutton suet. This was her method of treating the bleeding. My first thought was that this material was feces from a recto-vaginal fistula.

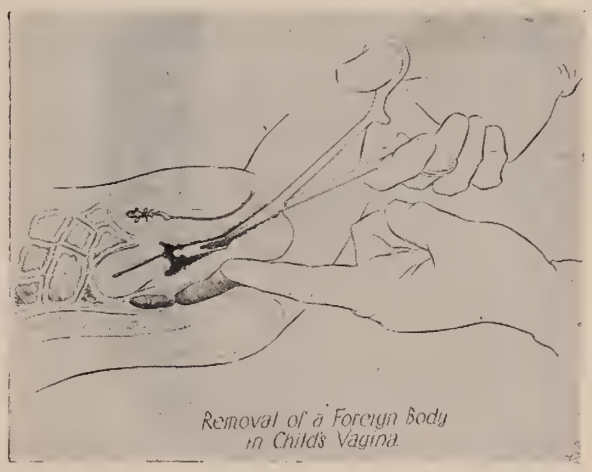

Fig. 1.—Method of extracting foreign body from child's vagina.

The largest animals which I have seen in the vagina have been pinworms.

Within the past few months several women have come to the office, each with a menstrual tampon unwittingly left in the vagina for a long period of time. One had had coital difficulty and had felt a mass. She suspected she had a tumor. She was a Ph.D. Another had had a foul discharge for four weeks. Soon after the onset of leucorrhea she 'phoned her family doctor and he prescribed vaginal suppositories and douches. These did no good. In each

*Read at a meeting of the Richmond Academy of Medicine, November 27, 1945.

of the cases there was mild vaginitis and the tampon which was found was very foul. Another patient came with salpingitis which she attributed to a menstrual tampon which had been forgotten in the

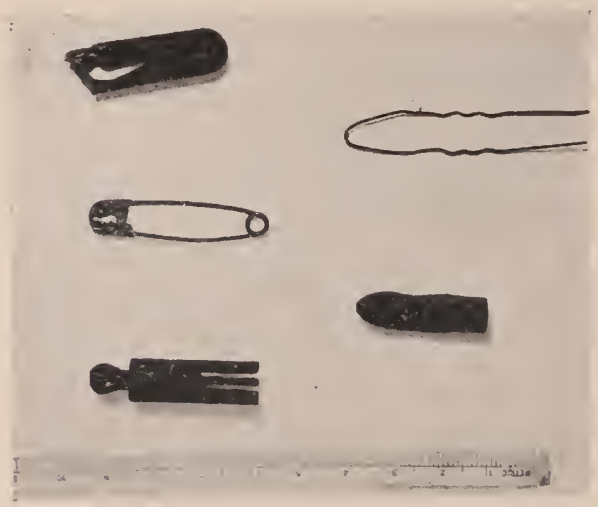

Fig. 2.—A diaper clip, safety pin, toy clothespin, hairpin, and metal pencil top removed in cases reported herein.

vagina for some time. A causal relationship seems unlikely but no specific organisms were found.

Pessaries are foreign bodies purposely placed. There are recorded cases of pessaries becoming embedded in the genital tract. Several years ago such a condition was observed in a cadaver in the dissecting room of the Medical College of Virginia. I have seen it become necessary to remove under anesthesia, and with a Gigli saw, an impacted doughnut-shaped pessary. Instances of fistula formation from pessaries have been recorded.

The explanation for the presence of the foreign body is not always clear. It must be that in most cases the object is placed in the vagina by the patient herself, though she frequently denies this. Often the denial is probably a wilful lie. Occasionally, perhaps, a child forgets what she has done, just as her mother forgets a menstrual tampon. In some cases the insertion of the foreign body is an act of masturbation; in others it may be due simply to a child's exploratory spirit. One child had previously put foreign bodies into her ears and nose. In one reported case an insane mother placed the object in the child. Some of the patients have been mentally deficient. In one case it was alleged that a brother, aged six years, had placed the multiple objects found in his two and a half year old sister's vagina. A child, aged nine years, in whom a button was found, said a boy classmate had "played with her privates" and she thought at one time had put something in her vagina. In the case of the tin box noted above, the foreign body was said to have been forcibly inserted by someone who ravished the girl. The paddy grain, previously referred to, had been worked into the vagina of a nine months old infant when she crawled onto a heap of paddy grain. The bael fruit had been inserted by the patient. It was her own method of treating a prolapsed uterus and the bleeding from an associated "epitheliomatous" lesion of the vulva. In two instances cotton from swabs was lost in the vagina by doctors taking smears. If I remember the legends correctly, and I may not, the Irish potato and the ligamentum nuchae of the ox, the museum specimens at Harvard, had been inserted by irate husbands.

It becomes necessary occasionally to use such foreign bodies as vaginal packs and tampons therapeutically in the vagina. Without medication these become very foul and should be rarely left in over twenty-four hours. We have found that by adding sulfonamide powder or solution, and more recently zinc peroxide in addition, packs can be left in several days, if necessary, with much less discharge and odor than formerly. We have routinely used

Fig. 3.—X-ray in Case 3, showing metal pencil top in vagina.

such medicated packs in connection with radium therapy for carcinoma of the cervix.

Leucorrhea is the outstanding symptom of a vaginal foreign body. Often the discharge is bloody.

A sanguineous discharge in a child is almost pathognomonic of a foreign body. It goes without saying that all patients with leucorrhea or abnormal vaginal bleeding should be examined. In the case of a child, a rectal examination should be done. Then, usually the foreign body can be palpated through the anterior rectal wall. The rectal finger will serve as a guide for introducing a probe or hemostat into the vagina. In most cases when the instrument strikes the foreign body a characteristic sensation is elicited. Metallic bodies may be detected by x-ray, though this method of detection is rarely necessary. The object can be grasped with a hemostat or similar instrument under the guidance of the rectal finger, and removed usually without difficulty. In the case of sharp objects, care must be taken not to penetrate the tissues. The use of a urethroscope in the vagina in children may sometimes be helpful. Anesthesia is rarely necessary. Usually the signs and symptoms quickly subside following removal of the foreign body.

The majority of cases of vaginal foreign bodies are in children. During a period of four months in 1944, five cases of foreign vaginal bodies in children were seen by Dr. T. S. Chalkley and the departments of pediatrics and gynecology at the Medical College of Virginia. These are as follows:

CASE 1. A 4½ year old white girl had had a bloody vaginal discharge for one month. A smear showed many mixed organisms including gram-positive extracellular diplococci. A toy clothes-pin was removed on May 15, 1944.

CASE 2. A 2 year old white girl had had a foul discharge for one month. A diaper clip was removed on July 28, 1944.

CASE 3. A 7 year old white girl had had enuresis for years, worse for the past few weeks. Blood was noted in the voided urine. Masturbation had been observed. Vaginal smears were reported positive for the gonococci. Recently polypoid tissue had developed in the vestibule. A metal pencil top was removed on July 31, 1944. This patient had been cystoscoped because of the bloody urine.

CASE 4. A 4 year old white girl had had a yellow foul sometimes bloody vaginal discharge for two months. A closed safety pin was removed on August 17, 1944.

CASE 5. A 13 year old mentally deficient white girl had inserted a hairpin into the vagina two days previously. The patient's attempt to remove the hairpin caused penetration of the vaginal wall and bleeding. The foreign body was removed on September 14, 1944. Three years previously a bobby pin had been removed from the vagina of this patient.

A sixth case is that of a 4 year old colored girl who was brought to the St. Philip Hospital emergency room on May 8, 1945, with a hairpin partly projecting from the vagina. One prong, projecting outward, had perforated the tissues of the hymen, thus fastening the pin in the vagina. The pin was removed by cutting off a portion of the perforating prong and straightening and then withdrawing the remainder of the pin.

SUMMARY: The literature on foreign bodies in the vagina has been reviewed. Several additional cases are presented. These include six cases of foreign bodies found in children.

"Who is't can read a woman?"

REFERENCES

Banerji, B. K.: Foreign Bodies, Case, *Indian M. Gaz.* **64**:26 (January), 1929.

Brady, L.: Multiple Foreign Bodies, *Bull. Univ. Maryland School Med.* **12**:145-147 (January), 1928.

Dave, I. S.: Foreign Body, Bael Fruit, *Indian M. Gaz.* **63**:334-335 (June), 1928.

Hermans, A. G. J.: Rare Finding Foreign Body in Vagina, *Nederl. Tijdschr v. Geneesk* **2**:1210 (September), 1926; ab. *J.A.M.A.* **87**:2135 (December), 1926.

Janover, C. N.: A Stone in the Vagina, *South African M. J.* **6**:24 (January), 1932.

Jones, W. R.: Foreign Bodies, *Urol. and Cutan. Rev.* **32**:374 (June), 1928.

Levy, S. K.: Foreign Bodies in Children; Simplified Method of Removal; 3 Cases, *Arch. Pediat.* **52**:186-190 (March), 1935.

Lifvendahl, R. A.: Case in Which Several Foreign Bodies Were Found in Vagina of Feeble-Minded Pseudohermaphrodite, *Am. J. Obst. & Gynec.* **25**:156 (January), 1933.

Mami, P. Lelli: Rare Foreign Body (leech), *Policlinico* (sez. prat.), **36**:742-743 (May), 1929.

Nixon, S.: Foreign Body in 4-Year-Old Child, with Resultant Massive Hemorrhage, *J.A.M.A.* **100**:1169-1170 (April), 1933.

Pilot, I.: Fusiform Bacilli and Spirochetes Associated with Foreign Body, *Am. J. Obst. & Gynec.* **18**:824-826 (December), 1929.

de Pol, G.: Leech as Cause of Grave Metrorrhagia, *Clin. Obst.* **36**:421-424 (July), 1934.

Rajagopolan, R. K.: Foreign Body, Case in Mucous Membrane, *Indian M. Gaz.* **63**:201 (April), 1928.

Schauffler, G. C.: Foreign Bodies in Immature Vagina, *California and West. Med.* **50**:411-413 (June), 1939.
Schauffler, G. C.: Pediatric Gynecology, Chicago, The Year Book Publishers, Inc., 1941.
Stalnaker, P. R.: Foreign Body in Vagina of 8-Year-Old Girl with Complications, *Urol. and Cutan. Rev.* **40**: 317-318 (May), 1936.
Stober, T.: Rare Case of Foreign Bodies in Vagina of 2½-Year-Old Child, *Monatschr. f. Kinderh.* **32**:151-152, 1926; ab. *J.A.M.A.* **87**:210 (July), 1926.

Physician Says Tongue Still a Good Indicator of Disease.

Years ago a doctor's observation and study of a patient's tongue were an important part of nearly every physical examination.

"Let me see your tongue," the old-time physician would ask his patient, and from its appearance and color he could usually make an accurate diagnosis. He was quick to recognize the strawberry tongue of scarlet fever, the shriveled tongue of dysentery and the brown, dry tongue of typhoid fever.

"Newer diagnostic methods and increased laboratory facilities have supplanted to some extent such detailed observation," says Russell A. Sage, M.D., of Indianapolis, but he adds that despite all the scientific advancements the modern physician can still rely on the tongue as an important indicator of many diseases.

Writing in the current issue of the *Archives of Otolaryngology,* published by the American Medical Association, Dr. Sage tells how nature has adapted the tongues of animals to meet individual requirements.

In man, sores of the tongue are commonly found on the surface or covering tissue which transmits sensations to the brain. Changes of temperature, touch sensations and the ability to perceive the four basic flavors—salt, sour, bitter and sweet—are the primary functions of the tongue-covering membrane.

"Generalized nervous disorders may be shown by certain misbehaviors of the tongue," Dr. Sage says, citing as examples the tremors seen in hyperthyroidism, the clumsiness of the tongue in decreased thyroid function and its "purposeless movements" in chorea or St. Vitus's dance.

In anemia, where the number of red blood cells or the amount of hemoglobin in the blood is reduced below normal, the tongue becomes pale.

A slick tongue, Dr. Sage says, usually means vitamin deficiency.

A coated tongue often has little to do with the state of a person's digestive system. "It may be a local condition due to lack of oral cleanliness," the author writes.

Edema or swelling of the tongue is due to infection or allergy. It often occurs in persons who have eaten fish, walnuts or chocolate, and it may result from bites and stings of insects or other injury.

An inflamed tongue might be caused by irritation from a jagged tooth or by an infection of the taste buds, while a burning tongue is usually associated with various forms of anemia and vitamin deficiencies. A poor fitting denture or excessive smoking may also cause a burning sensation of the tongue.

Vitamin deficiencies, due to lack of riboflavin and to lack of nicotinic acid (the cause of pellagra), bring on an inflammation of the tongue.

A "geographic tongue," in which the surface is marked by long, deep furrows instead of being smooth, is a common condition. Grayish thickened patches on the surface are noticed. The condition is "relatively harmless, but causes a great deal of worry in the mind of the patient," Dr. Sage says.

Ulcers of the tongue occur from infection and chronic irritation, and one of the most distressing tongue afflictions is the common canker sore. There are several types, and it is believed that indigestion, infected tonsils, adenoids and uncleanliness of the mouth and teeth are contributing causes to this unpleasant and painful mouth condition.

FIVE CASES OF LATENT TRICHOPHYTON INFECTION ACTIVATED BY THE USE OF PENICILLIN

ALBERT G. SCHNURMAN, M.D.,
Roanoke, Virginia.

The fundamental biologic and biochemical kinship of the various lower fungi has been repeatedly demonstrated.

In the five cases presented below, it is believed that with the original trichophyton infection an allergic state is produced; and that later, when penicillin is administered, an activation of the trichophyton allergic state occurs, resulting in complete manifestations of the original fungous disease.

Case I: H. F. O., male, age 24. Trichophyton infection of the feet in May, 1945. Proved by microscopic and cultural studies. Apparently cured by the use of salicylic acid ointment and potassium permanganate soaks, together with the use of ultraviolet light. In July, 1945, after a course of 300,000 u. penicillin I. M. for acute gonorrheal urethritis, the foot infection flared up and necessitated a repetition of the original treatment for trichophyton.

Case II: J. T. S., male, age 57, a baseball player. Treated and apparently cured of trichophyton infection with the above measures in January, 1945. In October, 1945, he was given a course of penicillin calcium tablets by mouth 1,500,000 u. for acute antral sinusitis. Two days later, his athlete's foot had recurred and required repetition of treatment.

Case III: O. H. B., female, age 46. Cured of athlete's foot for three years. Admitted to the hospital with an abscess of the upper jaw. Given 1,000,000 u. penicillin I. M. over a period of eight days. On the sixth day of administration, the patient complained of itching of the feet. Examination revealed an exacerbation of the old fungous infection.

Case IV: O. R. B., male, age 35. Had had "jock itch" while in the Army in the Pacific. Had been cured for a period of one year. Treated with 100,000 u. penicillin I. M. and 1,000,000 u. penicillin calcium simultaneously by mouth for acute gonorrheal urethritis. Thirty-six hours after the beginning of penicillin administration, treatment of a very acute "jock itch" condition was required.

Case V: A. G. S., male, age 34, with acute pharyngitis. Had had athlete's foot infection while in the Navy. Apparently cured for over 16 months. Took penicillin capsules 500,000 u. total and, during the administration, noted vesicular eruptions on the fingers and palms of hands from which nothing could be cultured, but from similar lesions on the feet, trichophyton was cultured with ease.

SUMMARY

Five cases are presented in which it is believed that penicillin has served to activate a latent trichophyton infection.

It is further believed that such activation is on an allergic basis because of biochemical allergenic similarity of the lower fungi.

501 Shenandoah Life Building.

THE FORUM

The First National Rural Health Conference.

In Chicago on March 30th, the first annual meeting of the National Conference on Rural Health was held. This meeting was sponsored by the Rural Health Committee of the American Medical Association. As representatives of your State Medical Society, Mr. Henry Johnson, the recently appointed Public Relations Officer, and I attended this session. Upwards of 180 individuals representing 40 of the 48 State Medical Societies, farm organizations, Government Agencies, etc., were present.

Dr. Crockett, Chairman of the AMA Committee on Rural Medical Service, presided and outlined the objectives of the gathering, which were primarily to discuss the problems relevant to the maintenance of rural health and the distribution of doctors in rural areas. The morning session was given up to prepared discussions on the various aspects of this problem.

Mr. Ranson E. Aldrich, Chairman, Medical Care Committee, Farm Bureau Federation, expressed the thought that as a fundamental proposition the various groups must work together. He stated that the farmer in general did not relish government subsidies. In his opinion, doctors charged too much for services to rural dwellers and that medical education cost too much in time and money.

Dr. Larson of North Dakota, representing the AMA Committee on Rural Medical Service, discussing the above paper, stated that doctors are likely to remain where their incomes are constant, that the problem was tied up with good roads and the relatively low economic status of the rural people. In any case, the practice of medicine must be made attractive to physicians. He also suggested that means of transportation be developed to bring the patients to the doctor, which would reduce the cost of medical care.

Dr. Mott of the Federal Security Agency cited figures to point up the need for medical care in rural areas, including the lack of Health Departments in 1,242 of the 3,070 counties in the United States. He suggested mandatory legislation to make communities match dollar for dollar to provide for health facilities. In further discussion of the problem, he stated that the rural purchasing power was low, and that the choices for a solution lay between:

1. Voluntary Health Insurance.
2. Compulsory Health Insurance.

In his opinion, the former would be inadequate and the latter would immediately solve all of the problems.

Dr. Victor Johnson, in an extemporaneous discussion of Dr. Mott's paper, emphasized that "evolution" was better than "revolution" in attacking this problem and that voluntary prepayment plans were quite young in point of time. Therefore, he felt that they had not been given a fair chance. Where tried, compulsory plans involved extensive red tape and invariably the overhead was more than predicted.

Mr. Strong, Secretary, Health Advisory Council of the Chamber of Commerce, emphasized the need for facilities in rural communities.

Mr. Leland Tate, formerly of V.P.I., temporarily with the Farm Foundation, gave an intelligent discussion of the importance of health education in rural communities to create an "awareness of health" and to overcome the present inertia. This must be conducted with regard to the educational status of the rural inhabitant, namely, on a common sense level.

Mrs. Sewell, of the American Farm Bureau Federation, gave a most intelligent and witty talk summing up the whole morning's work. She definitely favored a cooperative solution and not a government sponsored one.

Representative Priest, of Tennessee, gave the luncheon talk, which was quite general, but he spoke in favor of the Hill-Burton bill now in his committee.

The afternoon was given up to reports from the various states and it can be said that Virginia is well along, comparatively, in initiating various programs.

The AMA is definitely interested in attacking the problem at its source and hopes to stimulate state rural health committees to action.

May the writer appeal for your individual interest in this important fundamental problem. Frank discussions with your local people and farm organizations will serve to aid your Medical Society and

their Committee in an attempt to contribute to the betterment of medical care for rural people. Physicians must again be an integral part of their community, socially and economically, as well as medically.

H. B. MULHOLLAND, M.D.

Smallpox Treatment in 1717.

TO THE EDITOR:

Would the readers of the VIRGINIA MEDICAL MONTHLY be interested in the following from a letter of Lady Mary Montagu?

"Adrianople, Apr. 1 O. S. 1717.

"Apropos of distempers, I am going to tell you a thing that will make you wish yourself here. The smallpox, so fatal and so common amongst us, is here entirely harmless, by the invention of ingrafting, which is the term they give it. There is a set of old women who make their business to perform operations every autumn, in the month of September, when the heat is abated. People send to one another to know if any of their family has a mind to have the smallpox; they make parties for this purpose and when they are met (commonly 15 or 16 together), the old woman comes with a nutshell full of the matter of the best sort of smallpox, and asks which vein you please to have opened. She immediately rips open that you offer with a large needle (which gives no more pain than a common scratch), and puts into the vein as much matter as can lie on the head of her needle, and after that she binds up the little wound with a hollow bit of shell; and in this manner opens 4 or 5 veins * * * and are in perfect health to the eighth (day). Then the fever begins to seize them and they keep their beds 2 days, very seldom 3. They have very rarely about 20 or 30 in their faces, which never mark; and in eight days' time they are as well as before their illness * * * There is no example of anyone that has died in it; and you may believe I am very well satisfied of the safety of this experiment, since I intend to try it on my dear little son.

"I am patriot enough to take pains to bring this useful invention into fashion in England."

This above is an exact copy of Lady Mary's letter. I think she is somewhat confused in her Anatomy, for she probably does not mean "vein" where the old woman makes the scratch.

W. D. MACON, M. D.

Charlottesville, Virginia
December 15, 1945.

Editor's Note—The World's Best Classics, Vol. 4, Page 63 foot note reads, "Letter to Sarah Criswell, Dated Adrianople, Turkey, April 1, O. S., 1717. To Lady Mary is usually accorded chief credits for her introduction of inoculation into Western Europe."

Special Diet Relieves Fatigue Due to Sugar Deficiency in Blood.

Fatigue and dizziness from hypoglycemia, which is a deficiency of sugar in the blood, is effectively alleviated by dietary treatment with high proteins and complex carbohydrates.

Writing in the March 2 issue of *The Journal of the American Medical Association,* Major Samuel C. Karlan and Captain Clarence Cohn, of the Medical Corps, Army of the United States, say:

"Of 100 cases of fatigue and weakness studied, nine were believed to be primarily caused by hypoglycemia. The main complaints in all these cases were fatigue and dizziness. Unlike the fatigue in ordinary neurasthenia [psychoneurosis or nervous exhaustion characterized by abnormal fatigue], the fatigue suffered by these patients was not continuous but occurred at specified times, such as on arising in the morning or several hours after meals. It almost invariably occurred after having missed a meal. . . .

"The treatment used in these cases was entirely dietary. Diets high in proteins and carbohydrates of the more complex variety (starches rather than sugar) with frequent feedings prevented the symptoms in our cases."

PUBLIC HEALTH

I. C. RIGGIN, M.D.,
State Health Commissioner of Virginia.

The report of the Bureau of Communicable Diseases of the State Department of Health for April, 1946, as compared with the same month in 1945, and for the period of January through April, 1946, compared with the same period in 1945, follows:

	April 1946	April 1945	Jan.-April 1946	Jan.-April 1945
Typhoid and Paratyphoid	6	3	24	15
Diarrhea and Dysentery	152	118	560	930
Measles	2,598	273	6,988	903
Scarlet Fever	407	367	1,514	2,014
Diphtheria	27	23	168	103
Poliomyelitis	0	1	6	12
Meningitis	25	23	115	120
Undulant Fever	3	5	13	8
Rocky Mountain Spotted Fever	2	2	2	3
Tularemia	3	1	26	13

VIRGINIA'S MORTALITY RECORD IN WARTIME

In spite of the hardships of war due to crowded housing conditions, protracted working hours, and high tension living, the mortality experience on the home front was extraordinarily favorable. An average annual number of 28,713 persons died from all causes in Virginia during the war years, (1942-1944) with a rate of 10.2 per 1,000 population. This was the lowest rate on record for Virginia. During the prewar period (1939-1941) the average rate was 10.9. Both the white and colored races shared in the decrease.

The mortality experience of World War II shows some similarity, but a startling contrast as well, to World War I. The death rate of 14.0 in 1917 was a little lower than the rate (14.5) for the prewar year, 1916. However, in 1918, there was an abrupt rise and towering peak in mortality (rate 18.2) due to the influenza epidemic. It is noted also that the level of death rates during Warld War I was considerably higher than during the second world war.

Although there were potential health hazards due to the movement of the population to industrial areas and military training centers, mortality from communicable causes exhibited phenomenally low rates during wartime. The death rate for this group of diseases showed a decline of 20 per cent for the war period over the prewar years, 1939-1941.

The lowered rate for the respiratory diseases—tuberculosis, pneumonia and influenza—was especially noteworthy. The average annual rate of 50.4 per 100,000 population for tuberculosis during wartime represented a 15 per cent decrease over the prewar period (1939-1941). However, because of the long course of the disease, it is impossible at present to evaluate the true significance of the decline, as the full effect of wartime conditions on tuberculosis mortality may not be seen for some years.

The wartime death rate for pneumonia and influenza combined (70.2) was the lowest on record for the State.

Favorable health conditions in the State were influenced by the fact that no less than eight of the acute infectious diseases recorded lower death rates fcr the war period than for the last three prewar years. These causes comprised typhoid fever, diphtheria, whooping cough, measles, scarlet fever, tularemia, malaria and diarrhea-dysentery. Although deaths from epidemic meningitis, undulant fever, acute poliomyelitis, and Rocky Mountain spotted fever showed some gains during wartime, mortality from these diseases was not numerically great. The influence of the outbreaks of epidemic meningitis in 1943 and 1944, and of poliomyelitis in 1944 was noted in mortality from these causes.

Despite the increasing hazards of childbearing in wartime due to the participation of women in industry, maternal mortality registered a new low rate for the war period. The average annual rate of three deaths per 1,000 live births for the war years represented a 33 per cent decrease over the rate (4.5) for the prewar period, 1939-1941. As might be expected, the years of lowest maternal mortality showed the highest proportion of births attended by physicians and of deliveries occurring in hospitals.

The favorable mortality seen for maternal causes also maintained for infants under one year. The

average annual rate of 62.4 infant deaths per 1,000 live births during the period 1939-1941 fell to 50.1 during wartime.

The death rate of 76.9 per 100,000 population due to accidents occurring in the State during wartime showed a decrease of 7 per cent over the prewar years, 1939-1941. The reduction in accident fatality was brought about, for the most part, by a sharp decline in deaths due to motor vehicles.

Fatal occupational accidents, however, affected by a great increase in industrial activity, rose from 385 in 1941 to 538 in 1944, a gain of 40 per cent. The peak in mortality from industrial accidents occurred in 1943 when there were 586 deaths.

The decreasing death rates during wartime were a continuation of a significant downward trend during the past decade. With an increased effort toward lowering mortality from preventable causes, postwar death rates should continue downward, with a consequent lengthening life-span.

THE EMIC PROGRAM

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

"When will the EMIC program end" has been asked so many times it may not be out of place that a few comments be made. These statements are being made without any attempt to praise or condemn the program.

The plan was begun in this State August 28, 1943. Many changes have occurred since that time but the main provisions have remained the same. The fund and the regulations are entirely federal; the administration, State. The fee for complete obstetric care is now $50.00. Smaller changes have been made in pediatric fees. Each hospital is paid on a basis of its cost per patient day. It is rare that the cost of any two hospitals is the same.

Up to May 1, 1946, a total of 24,691 patients have been authorized for care; of these 19,431 were obstetric and 5,260 were pediatric. The total cost has been $1,488,896.63. There has been approximately a 30 per cent decrease in the number of authorizations for the first four months of 1946 and the corresponding period of 1945.

The plan was set up to be continued until six months following the duration of the emergency. The end of the emergency has not been declared. If today were set as that time, and an obstetric patient were authorized for care at the end of the six months' period, she would receive care throughout pregnancy and the postpartum period; the baby, for twelve months thereafter. That means that the program could be continued for a minimum of twenty-seven months from the above date. Since it is always possible that a program of this type could be terminated *abruptly,* it is urged that physicians and hospitals submit bills as soon as services to these patients are complete.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—Mrs. P. M. Chichester, Abingdon
President-Elect—Mrs. J. E. Hamner, Petersburg
Recording Secretary—Mrs. Nathan Schuman, Alexandria
Corresponding Secretary—Mrs. L. C. Brawner, Richmond
Treasurer—Mrs. Reuben F. Simms, Richmond

Auxiliary to the Danville-Pittsylvania Academy of Medicine.

At a meeting on April 10, at which time the Auxiliary was reorganized, the following officers were elected: Mrs. Roy W. Upchurch, President; Mrs. Henry H. Hammer Vice-President; Mrs. Henry R. Bourne, Secretary; Mrs. Henry A. Wiseman, Treasurer; Mrs. Henry J. Langston, Chairman, Social Committee; and Mrs. Walter McMann, Chairman, Press and Publicity.

At this meeting it was decided to invite the President of the Auxiliary to the Medical Society of Virginia to the next meeting to aid in the reorganization and to give recommendations as to the best functioning of this organization.

Mrs. Chichester was present at the May meeting and gave a most interesting and instructive talk on the subject of the "Aims and Functions of the Woman's Auxiliary". It was decided that the project for the coming year be Cancer Control. Mrs. Roy W. Upchurch, President of the Auxiliary, is also President of the Cancer Control committee in Danville. The visit of Mrs. Chichester was most helpful and pleasurable to all members present. A luncheon preceded the address.

Soon after the reorganization, a tea was given for Mrs. Leota C. Swank, R. N., the new Superintendent of Nurses at Memorial Hospital, Danville.

Plans at present call for a monthly meeting during the year.

(Mrs. Walter) Helen S. McMann,
Chairman, Press and Publicity.

Richmond Auxiliary.

The Auxiliary to the Richmond Academy of Medicine held its "Public Relations Day" meeting on April 19th at the Academy Building. An invitation had been issued to the representatives of all federated Women's Clubs and civic organizations of Richmond, and we were gratified by the number who were able to attend.

After a subscription luncheon, a brief report was given by the committees in charge of the annual bridge party to be held May 3rd for the benefit of Sheltering Army Hospital.

Mrs. E. L. Flanagan then introduced our speaker, Dr. I. C. Riggin, State Health Commissioner, who gave an informative talk on state and federal health legislation.

Julia R. Pastore (Mrs. P. N.),
Acting Chairman, Press and Publicity.

The Mid-Tidewater Auxiliary

Has had a year of many difficulties, due to the extreme cold winter and illness in the families of its members.

Although we had expected to observe our regular Doctor's Day celebration at our April meeting in 1945, for several reasons we did not hold our regular meeting at this time.

Our July meeting was held in the hospitable home of Mrs. Arthur Van Name. At the business session it was moved and carried that each member raise at least $1.00 for our treasury. We then heard Dr. Charles Caravati who told some of his interesting experiences while in the Service and gave some helpful suggestions in the treatment of shell shock and other cases of returning veterans.

The October meeting was held with Mrs. Cox where we are always graciously received. The program on Cancer again urged us to "Fight Cancer with Knowledge" and stressed the fact that if taken in time cancer can be cured.

The January meeting also was with Mrs. Cox. The new officers for 1946 and 1947 were elected with Mrs. W. S. Cox as President and all other officers holding over for another year.

The Health Program suggested by the AMA was arranged.

The Mid-Tidewater Auxiliary looks forward to a year of progress under the capable and efficient leadership of Mrs. Cox.

Ellie Cocke Campbell (Mrs. Hawes).

BOOK ANNOUNCEMENTS

Books received for review are promptly acknowledged in this column. In most cases reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Cornell Conferences on Therapy. Edited by HARRY GOLD, M.D., Managing Editor; DAVID P. BARR, M.D.; McKEEN CATTELL, M.D.; EUGENE F. DuBOIS, M.D.; and CHARLES H. WHEELER, M.D. Volume One. New York. The Macmillan Company. 1946. xix-322 pages. Cloth. Price $3.25.

New and Nonofficial Remedies, 1945. Containing Descriptions of the Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1945. Issued under the Direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association. 760 pages. Cloth.

There was a time, when the pharmacopoeia with its decennial revision was sufficient to keep one up to date on therapeutic remedies. That day has long since passed. New remedies are being introduced so rapidly that authoritative information is needed at more frequent intervals. One has only to mention hormones, both natural and synthetic, the sulfa drugs and penicillin to bring home the fact that an annual edition of *New and Nonofficial Remedies* is becoming more indispensable each year. The 1945 issue is well arranged and well indexed and its attractive format makes it a very handy reference book.

Convalescent Serum and Penicillin Best for Scarlet Fever.

A navy physician has found that simultaneous injections of human convalescent scarlet fever serum and penicillin provide the best means for treating scarlet fever.

Lieut. Comdr. Paul Ashley (MC), U.S.N.R., writing in the March 23 issue of *The Journal of the American Medical Association,* says that within 24 hours after the appearance of the rash the patients should have convalescent scarlet fever serum injected into their veins and 30,000 units of penicillin injected into the muscles. Thereafter, they should receive 15,000 units of penicillin every three hours until their temperature has remained normal for five days.

Comdr. Ashley states that the patients responded to this treatment better than to that of any other tried, regardless of the severity of the illness.

The blood serum comes from patients who are convalescent from scarlet fever and, when introduced into the body, it produces immunization by virtue of the antibodies which it contains. These antibodies are specific substances which react against an invading micro-organism.

Comdr. Ashley's report was based on 298 patients who were studied in groups of approximately 50 to compare different types of treatment.

The author says that from 50 to 60 per cent of the cases of scarlet fever observed were caused by certain types of group A beta-hemolytic streptococci which are resistant to the sulfonamides. Therefore, the author cautions against the use of sulfadiazine in the treatment of such patients.

Schering Gives $40,000 in Drugs to Red Cross for the Philippines.

Medical and surgical supplies were reported as one of the most critical needs for the desolated sections of the Philippines, following the recovery of the Islands by American troops. Government and relief agencies have since appealed for emergency supplies of these important materials.

Recognizing the urgency of the need, Mr. Francis C. Brown, president of Schering Corporation, recently authorized a gift of Schering drug products to the American National Red Cross for use by the Philippine National Red Cross in the civilian aspects of rehabilitation operations in the area. Valued at more than $40,000, this important contribution was promptly accepted by Mr. George C. Smith, general supply officer of the Red Cross in Washington. The shipment was made from the Schering plant in Bloomfield, New Jersey and convoyed under armed police guard to the *S. S. Rainbow* in Hoboken.

EDITORIAL

Dr. J. Shelton Horsley

1870-1946

THE death of Dr. J. Shelton Horsley on April 7 brought an era to an end in Richmond and Virginia surgery. For the first time since the return of Dr. Hunter McGuire in 1865, Richmond is without a general surgeon in the older, broader sense of the term. While in more recent years Dr. Horsley was thought of primarily as an abdominal surgeon, his contributions in the fields of vascular, plastic, orthopedic, urological, neurological and gynecological surgery indicated a versatility that is no longer expected or found in the surgeon of today.

In a sense he was a product of his time. Although he spent two years postgraduate training in New York he was largely self-trained. The story of his introduction to surgery was typical of Dr. Horsley. While engaged in general practice in Staunton, shortly after his graduation from the University of Virginia in 1892, he was called to treat a man who had been run over by a train. He found it necessary to do a hip amputation and reported the case. Dr. John Allen Wyeth of New York, who devised the Wyeth pins for high thigh amputation, chanced to read this case report and wrote Dr. Horsley to congratulate him on the successful outcome. In the correspondence which followed Dr. Wyeth offered him an assistantship. Two years later, because of ill health, he went to El Paso, Texas, where he was Surgeon-in-Chief of the St. Luke's Hospital until his return to Virginia in 1903, as Professor of the Principles of Surgery at the Medical College of Virginia. The experimental dog house which he built during this period and operated for many years may be seen on 13th Street. Here medical students were introduced to the principles of surgery and experimental problems were begun which later stood the test of clinical application. In 1912 he opened St. Elizabeth's Hospital and fittingly named it after Mrs. Horsley, the former Miss Eliza Braxton of Staunton.

The originality and investigative spirit which characterized his earlier years at El Paso and the Medical College of Virginia continued unabated during the thirty-four years that he carried on his work at St. Elizabeth's Hospital. Here he developed the Horsley pyloroplasty and the Horsley modification of the Billroth I operation for gastric resection. While these two operations are probably most closely associated with his name, a review of surgical texts show no less than fourteen procedures or technical aids which were devised by him. Some of these operations have been superceded by more modern methods but it is a tribute to the physiologic principles upon which they were founded that none were discarded because they were basically unsound. Visiting surgeons always expressed surprise that Dr. Horsley's work was done in a small private hospital. This was particularly true of foreign visitors who associated clinical research only with large teaching hospitals.

Any movement designed to advance science received his wholehearted support. He was a founder and an early President of the Virginia Academy of Science. In 1925, as a memorial to his father, he gave $10,000, the interest of this sum to be awarded biannually for the most outstanding original work by a recent medical graduate of the University of Virginia. His interest in cancer increased with the years and culminated in his appointment in 1943 as the surgical representative on the National Advisory Cancer Council.

Limitations of space prevent the enumeration of the many offices held by Dr. Horsley in local, state, regional and national medical societies. In 1926 he was elected President of the Medical Society of Virginia. He was a former President of the American Association for the Study of Neoplastic Diseases and for eleven years he was Chairman of the Council on Scientific Assembly of the American Medical Association. He was the recipient of many honorary awards. Shortly before his death he was elected a corresponding fellow of the Medical Society of London.

He was author of six books on surgical subjects and served as associate editor of the Lewis "Practice of Surgery" until his death. He wrote more than 250 articles on surgical topics. The vigor and clarity of his writings added much to the originality of the thought. The first few chapters of Volume I of "Operative Surgery", in which biologic and physiologic principles are discussed, are models of medical expression. As a speaker he was somewhat less effective but his ability to illustrate his subject by commonplace examples and the forcefulness of his delivery offset to a large degree any lack of fluency.

He was a man of strong convictions who spoke freely and frankly on any subject under discussion. He believed that words should reveal and not conceal the speaker's thoughts and his listeners were never left in doubt as to his stand on any question. He was intensely loyal to his friends. He aided the younger men who served under him with every means at his disposal and followed their later progress with interest and pride. It would be impossible to evaluate the extent of Dr. Horsley's influence but unquestionably it was great and many physicians and surgeons today have a higher regard for scientific truth and a keener interest in clinical investigation by reason of having been associated with him.

But in a larger sense, the doctors of Richmond and Virginia are all beneficiaries of Dr. Horsley, for he did much to raise the standard of surgery in Virginia and he helped to establish and maintain Richmond's position as a medical center.

HARRY J. WARTHEN, JR.

Calendars Old and New

EXCEPT at Easter and possibly when you are reading the history of the XVII and first half of the XVIII centuries, probably you never give the calendar a thought. The measurement of time is based on the motion of the heavenly bodies. A day represents one revolution of the earth on its axis. A month is one revolution of the moon around the earth. A year is the time it takes the earth to revolve about the sun. These units of time are made by God and cannot be changed. A calendar is an arrangement for keeping track of these units of time. It is man-made and can be changed. In fact, the calendar as we know it has been changed many times. The Sumerians had a lunar-solar calendar as early as 3500 B. C. The appearance of the new moon on the Western horizon was the signal to start a new month. Such a month was 29 days, 12 hours, and 44 minutes long, and twelve such months gave them a year of 354 days. Consequently, the Sumerians had to add an extra month about every third year to bring their calendar back in step with the seasons. The Jews inherited the Sumerian calendar. They had a fixed schedule for inserting the extra month. The Mohammedans, on the other hand, use a strictly lunar calendar and make no effort to bring it into conformity with the seasons.

About 500 B. C. the Chaldeans determined the length of the year to be 365 days, 6 hours, 15 minutes, and 41 seconds, which is less than half an hour wrong. Later

on, about 300 B. C., the priests in Egypt made use of this value and introduced leap year, adding an extra day every fourth year.

The early Romans used a calendar similar to that of the Jews but had no rule for inserting the extra month. It was up to the authorities to insert the extra month whenever the calendar became a month fast. Politicians took advantage of this and often lengthened their term of office by this means. When Julius Caesar came into power the Roman calendar was so far wrong that the calendar indicated the beginning of Spring when it was really the beginning of Winter. He was impressed with the need for a scientifically constructed calendar. He called the astronomer, Sosigenes, to Rome from Alexandria, and the two designed the Julian calendar. The Julian calendar disregarded the phases of the moon entirely. The 365 days were divided into 12 months as follows: Januarius 31, Februarius 29, Martius 31, Aprilis 30, Maius 31, Junius 30, Quintilis 31, Sextilis 30, September 31, October 30, November 31, and December 30. Every 4th year an extra day was added to Februarius to take up the one-fourth day that was left over from the three previous years. To bring the calendar back into step with the seasons the year 46 B. C. was lengthened to 445 days, and the month Quintilis was changed to Julius in honor of the Emperor.

Caesar was assassinated a year after his calendar was put into operation, and through a misunderstanding leap year was inserted every third year. Augustus saw what was wrong and straightened out the difficulty, and while he was making the changes he changed the name of the seventh month to Augustus in honor of himself. Since the month named after Julius Caesar contained 31 days, Augustus increased the number of days in Augustus to 31, and to compensate for this he took a day from Februarius. This made three 31-day months come in a row, so he changed September to 30 days, October to 31, November to 30, and December to 31 days, respectively.

Sosigenes made a mistake of 11 minutes in the length of the year. This error amounts to one day every 128 years. After 1600 years the calendar was nearly two weeks wrong. According to the rule adopted at the Council of Nicea in 326 A. D., Easter was celebrated on the first Sunday following the first calendar full moon after the beginning of Spring. The date of March 21st was taken as the beginning of Spring. If Sosigenes' error had remained uncorrected, Easter would have come in time to be celebrated in Summer, then in Autumn, and finally in 29,000 years would have been celebrated in Winter. This was a serious matter and Pope Gregory XIII called together a commission to design a new calendar. The leap year rule was changed so that there would be 97 leap years in every 400 years, and to bring the calendar back into conformity with the seasons, ten days, October 5th to 14th, were dropped from the calendar for 1582. Catholic countries adopted the Gregorian calendar at once. England and the American colonies adopted it in 1752. By that time 11 days had to be dropped. This led to great confusion and some people thought that their lives were being shortened by almost two weeks, as indeed they were, for there were riots and bloodshed. Russia did not change her civil calendar until 1918, and the Greek Orthodox Church has never made the change.

New Year's day has been celebrated at various times by various peoples. The ancient Egyptians, Phoenecians, and Persians, began their year at the Autumnal equinox. The ancient Greeks started their year at the Winter solstice. The Jews begin their ecclesiastical year at the Spring equinox. The Romans for a hundred or more years before Caesar's time began their year in the Spring. That is the reason the last four months of our year bear names meaning the seventh, eighth, ninth, and tenth months. Caesar moved the first of the year to January 1st, and this was retained in

the Gregorian calendar. The 25th of March was New Year's Day for most Christian peoples in the middle ages. This led to great confusion in dates between 1582 when the Catholic countries adopted the present calendar and 1752 when the English speaking countries adopted it.

The origin of the concept of the week is obscure. The ancient Scandinavians had a five day week. In some parts of Africa the week is only three days long. The seven day week originated in West Asia and from there spread to Europe and Africa. In most countries the week provides in a regular and systematic manner a market day and/or a day of rest. On the Congo the word for week is the same as the word for market. The second chapter of Genesis, second verse, states that on the seventh day God ceased his work, and that seems to be a good rule for human beings to follow.

The difficulty of fitting the week into the calendar is that 365¼ days more or less is not divisible by 7 or any other number, for that matter. Consequently, any given day in the calendar falls on a different week day from year to year. Christmas, for instance, came on Tuesday last year, and will come on Wednesday this year. I doubt if anyone knows on what day of the week Christ was born, not that it matters greatly, but when a certain day like Easter must fall on the same day of the week, it becomes necessary to have a calendar for that particular year at hand.

However, it is possible by setting the 365th day and the 366th day in leap years aside as days apart from any month, to construct a calendar in which each day falls on the same day of the week year after year. Nearly 100 years ago Auguste Comte suggested a calendar of 13 months. Each month would start on a Sunday and would consist of exactly four weeks. Each month would be exactly like every other month and each year would be like every other year. The 365th day was put at the end of the year after the last day of December and before the first day of January.

Many of the advantages of the Comte calendar can be had with less radical changes. The proposed World Calendar divides the 364 days into four equal quarters of 91 days each. The quarters contain exactly 13 weeks. Each month will contain the same number of working days. All the years will be the same so that a given date always comes on the same day of the week. Easter would always come on April 8th which is only one day away from the actual anniversary, April 9th. The 365th day, "Year End Day", follows December 30th. In leap years the extra day, another world holiday, follows June 30th which would be between a Saturday and a Sunday.

A similar calendar has been proposed by Lieutenant-Commander Willard E. Edwards of the U. S. Navy. In the Edwards calendar New Year's Day is the first day of the year and each quarter begins on a Monday. The second month of each quarter begins on Wednesdays and the third month of each quarter begins on Fridays. There are no Friday-the-thirteenths in the Edwards calendar. The 1st, 15th, and 30th, common payroll days, all fall on week days. The last business day of each quarter always falls on a Saturday. Each week begins on a Monday and Sunday becomes the seventh day of the week. With a fixed Easter there will be six 3-day U. S. A. holidays every year, and seven on leap years. Anniversaries and holidays will always fall on the same day of the week as well as the same day of the month. The year always ends on a Sunday which is very suitable for either Watch-Night services or New Year celebrations after the stroke of twelve at midnight.

Hawaii has given official recognition to the Edwards Calendar with the following resolution: Whereas, the perpetual calendar (also known as The Edwards Calendar) simplifies and revises the calendar scientifically and permanently with no more than two days' variation from the present system; now therefore Be It Resolved by the

House of Representatives of the Twenty-Second Session of the Legislature of the Territory of Hawaii, that the Congress of the United States of America be and is hereby respectfully requested and urged to propose that The Edwards Perpetual Calendar be adopted by all nations at the Peace Conference and to propose to all United Nations that they now appoint a national committee to study The Edwards Perpetual Calendar with a view toward its acceptance at the Peace Conference.

PRESIDENT'S MESSAGE

TO THE MEDICAL PROFESSION OF VIRGINIA:

THE Cavalier Hotel Corporation has informed us that practically all of the Beach hotels are booked to capacity until November 1st; however, a definite number of reservations have been made for the members of the Medical Society of Virginia for the meeting in October. The hotel management would like to have these reservations made as soon as possible.

They have informed us that from ten to twenty-five reservations at every convention are not taken up and that the prospective guest failed to notify them in time for them to use the room, so that at least one day is a dead loss to the hotel. It was first thought that they would be justified in asking a deposit of twelve dollars for single rooms and twenty dollars for double rooms, in order to protect the hotel. However, they have stated that they will not require the deposit, provided the management is notified by wire or phone forty-eight hours before the expected arrival of a guest if he finds he will not be able to come. My own reaction to it is that if one is so negligent, the hotel would be justified in collecting for one day's occupancy.

The management of the Cavalier has undertaken to provide accommodations for guests who might not be located in the hotel in other hotels along the Beach front, so naturally, unless they receive cancellations, they would hold the Cavalier responsible for rooms not occupied.

I am sure it is only necessary to call your attention to this to see its fairness and to ask you to register early. Also, please cancel your reservation promptly if you find you will not be able to attend.

I look forward to seeing you at the Beach in October.

Yours very sincerely,

JULIAN L. RAWLS, *President,*
Medical Society of Virginia.

SOCIETIES

Virginia State Board of Medical Examiners.

At the meeting of the Board, March 25-28, the following applicants were granted licenses through examination:

Dr. Lane Ameen, Philadelphia, Pa.
Dr. Thomas A. Anderson, Jr., Houston, Texas.
Dr. Arthur Argoff, Harrisburg, Pa.
Dr. Lomas E. Ball, Abingdon.
Dr. William H. Barney, Roanoke.
Dr. Max Baumeister, Jr., Norfolk.
Dr. Frank M. Blanton, Richmond.
Dr. Joseph Alston Boyd, Jr., Atkinson, N. C.
Dr. Charles Harry Brant, Lakewood, Ohio.
Dr. James Webster Brooks, Winchester.
Dr. Esther Clark Brown, Salem.
Dr. Raymond Sidney Brown, Schley.
Dr. Royce Lee Brown, Norfolk.
Dr. Marvin Garten Burdette, Richmond.
Dr. David Staats Burnet, Orange, N. J.
Dr. Rowland Harvey Burns, Lebanon.
Dr. William Dimmock Buxton, Norfolk.
Dr. Edward Kent Carter, New Orleans, La.
Dr. Gilbert S. Campbell, Jr., Charlottesville.
Dr. John Cadwell W. Campbell, Richmond.
Dr. William Everett Carter, Alexandria.
Dr. William Byrnes Cecil, Dublin.
Dr. George Allan Chapman, Richmond.
Dr. Lewis Smith Chase, Hartford, Conn.
Dr. John Wallace Compton, Jr., Ronceverte, W. Va.
Dr. Edward Leslie Cole, Jr,, University.
Dr. William Edward Copenhaver, Crockett.
Dr. George Edwin Cox, Memphis, Tenn.
Dr. Harry Duffield Cox, Charlottesville.
Dr. Geoffrey William Curwen, Worcester, Mass.
Dr. Dahar Cury, Jr., Norfolk.
Dr. James Hubert Davidson, Richmond.
Dr. Albert Henry Dudley, Jr., Baltimore, Md.
Dr. Arthur Ebbert, Jr., Wheeling, W. Va.
Dr. Walter L. Evans, Jr., Lynchburg.
Dr. Belle DeCormis Fears, Accomac.
Dr. Edward Graham Field, Nuttall.
Dr. Willard Milton Fitch, Parris Islands, S. C.
Dr. John R. Fitzgerald, Rochester, N. Y.
Dr. Ivan Graham Freed, Harrisonburg.
Dr. Don A. Gaddis, Arlington.
Dr. Robert Barrett Gahagan, Jackson Heights, N. Y.
Dr. Thomas Hancock Garth, Charlottesville.
Dr. John Alexander Gill, Richmond.
Dr. Sam Dixon Graham, Charlottesville.
Dr. Thomas Walton Green, Portsmouth.
Dr. Donald LeRoy Greever, Woodville, Ohio.
Dr. Clifton Rhodes Gruver, Pensacola, Fla.
Dr. Van Wyke Gunter, Richmond.
Dr. Owen Gwathmey, Richmond.
Dr. George Walter Hambrick, Jr., Princeton, W. Va.
Dr. George Southey Hankins, Newport News.
Dr. Gunyon Mitchell Harrison, Baltimore, Md.
Dr. Jacquelin M. Harrison, Charlottesville.
Dr. Robert William Hartley, Clifton Forge.
Dr. Wayland Jackson Hayes, Jr., Charlottesville.
Dr. Charles Wenger Hertzel, Denbigh.
Dr. Malcolmn Alexander Holliday, Charlottesville.
Dr. John Warren Hollowell, Portsmouth.
Dr. Mark Edgar Holt, Jr., Petersburg.
Dr. Grover Cleveland Honeycutt, Jr., Big Stone Gap.
Dr. Marcel Jerome Hornowski, Jamaica, N. Y.
Dr. Alice Swecker Huff, Norfolk.
Dr. Samuel Hammond Huff, Jr., Norfolk.
Dr. William Harvey Huffstetler, Jr., Richmond.
Dr. Richard Lemmon Hughes, Jr., Richmond.
Dr. Rupert Stanley Hughes, Jr., Richmond.
Dr. Malcolm Earle Hunter, Jr., Richmond.
Dr. George William Hurt, Roanoke.
Dr. James Byron Hutcheson, III, Roanoke.
Dr. Robert Price Irons, Charlottesville.
Dr. Clara Mae Iseley, Richmond.
Dr. Randolph Mott Jackson, Richmond.
Dr. Walter H. Johnson, Norfolk.
Dr. George Robert Jones, Richmond.
Dr. Homer Rodeheaver Justis, Lynchburg.
Dr. Elmore Porter Kalbaugh, Jr., Richmond.
Dr. Claude Kelso Kelly, Ayletts.
Dr. William E. Kelly, Brooklyn, N. Y.
Dr. Charles Kessler, Charlottesville.
Dr. Edward Joseph Kiember, Richmond.
Dr. Casper Sidney King, Boston, Mass.
Dr. John Talbert King, Burlington, N. C.
Dr. Howard Israel Kruger, Norfolk.
Dr. Matthew Lyle Lacy, II, Roanoke.
Dr. Morris Arthur Lambdin, Charlottesville.
Dr. Harry Teter Linger, Clarksburg, W. Va.
Dr. Charles Elroy Llewellyn, Jr., Richmond.
Dr. Richard Hubert Lowe, Jr., Roanoke.
Dr. John Milton Lukeman, Brooklyn, N. Y.
Dr. Theodore Roosevelt Mack, Richmond.
Dr. Joseph Hyman Marko, University.
Dr. John James Marra, Philadelphia, Pa.
Dr. Gerald Arthur Martin, Baltimore, Md.
Dr. James Dolan Mathias, Mathias, W. Va.
Dr. James Terrell May, Jr., Norfolk.
Dr. Lawence George May, Wind Gap, Pa.
Dr. Madge Dunn May, Norfolk.
Dr. Dennis Parfrement McCarty, Delaplane.
Dr. Walter Copley McLean, Charlottesville.
Dr. Charles Wesley Merritt, Boyle, Miss.
Dr. Henry Carl Messerschmidt, Jr., Richmond.
Dr. Unity Fern Monger, Harrisonburg.
Dr. Robert Patrick Moore, Hampden-Sydney.
Dr. Herbert N. Munhall, Jr., University.
Dr. Herman M. Nachman, Middleburg.
Dr. Richard Deaton Nauman, Richmond.
Dr. William Whitehurst Old, III, Norfolk.
Dr. Earl Tracy Owen, Lynchburg.

Dr. Albert James Paine, Pittsburgh, Pa.
Dr. William Graham Painter, Big Stone Gap.
Dr. William Eugene Partee, Jr. (Col), Norfolk.
Dr. William Milholland Patterson, Charlottesville.
Dr. Samuel Randolph Penn, Roanoke.
Dr. Thomas Garland Potterfield, Wynnewood, Pa.
Dr. Lula Johnson Power, Charlottesville.
Dr. Robert L. Price, Norfolk.
Dr. Michael August Puzak, Arlington.
Dr. Richard Courtney Reed, Norfolk.
Dr. Emmett Francis Reese, III, Emory University, Ga.
Dr. Robert Legare Reeves, Madison, N. J.
Dr. Philip Gordon ReMine, Cleveland, Ohio.
Dr. Lewis George Richards, Jr., Oakland, Calif.
Dr. Benito B. Rish, New York City.
Dr. Charles Robinson, Richmond.
Dr. Maurice S. Rosenburg, Petersburg.
Dr. Milton Lewis Rosenburg, Charlottesville.
Dr. Charles Alfred Rothfuss, Williamsport, Pa.
Dr. Russell A. Salton, University.
Dr. Roy Burton Sampson, Jr., Roanoke.
Dr. Robert Hammond Sease, Raleigh, N. C.
Dr. Stuart McGuire Sessoms, Roseboro, N. C.
Dr. Herbert Ralph Silverman, Danville.
Dr. Thomas Emmett Smith, Hayes Store.
Dr. Robert Lee Sommerville, Richmond.
Dr. Catherine Hoover Stone, Richmond.
Dr. Raymond Edward Stone, Boston, Mass.
Dr. Paul S. Stonesifer, Jr., Roanoke.
Dr. William Hanna Talbot, Richmond.
Dr. Isabel Taliaferro, Richmond.
Dr. Thomas Murrell Thornhill, Jr., Lynchburg.
Dr. Oscar A. Thorup, Jr., Honolulu, Hawaii.
Dr. Andrew Martin Tiernan, Richlands.
Dr. Charles Newton Van Horn, Richmond.
Dr. Nancy King Wade, Washington, D. C.
Dr. George Richard Waterman, Union Springs, Ala.
Dr. Paul Paine Webb, Newcastle.
Dr. Stanley Wise White, Odd.
Dr. Robert Bocock Wilkins, Seattle, Wash.
Dr. Earl Edward Wilkinson, New Orleans, La.
Dr. Charles William Wilson, Seattle, Wash.
Dr. Morton Charles Wilson, Charlottesville.
Dr. Charlie F. Wingo, Richmond.
Dr. William Chisholm Winter, Jr., Chicago, Ill.
Dr. Fred Eugene Wise, Marmet, W. Va.
Dr. Sydnor Terry Withers, Norfolk.
Dr. George Andrew Zirkle, Jr., Chattanooga, Tenn.
Dr. John A. Cifala (Osteopath), Portland, Me.

LICENSED BY RECIPROCITY

Dr. Louis Edward Aaron, Raven.
Dr. Norman Adair, Charlottesville.
Dr. Arthur S. Bauer, Washington, D. C.
Dr. Jerome Nathaniel Baum, Merion, Pa.
Dr. Joseph Beinstein, Arlington.
Dr. Ernest Julius Benko, Norton.
Dr. Lester S. Blumenthal, Washington, D. C.
Dr. Robert Joseph Bosworth, Washington, D. C.
Dr. Randal A. Boyer, Richmond.
Dr. Lionel Abbit Canaan, Brooklyn, N. Y.
Dr. Earnest B. Carpenter, Newport News.
Dr. Walter Scott Clark, Arlington.
Dr. James Francis Clinton, Martinsville (Temporary License.)
Dr. Lilton C. Cobey, Washington, D. C.
Dr. Theodore R. Coleman, Front Royal.
Dr. Everett Roy Cooper, Marion.
Dr. Robert C. Crawford, Roanoke.
Dr. Benjamin Franklin Dean, Jr., Washington, D. C.
Dr. Stuart Jerome Eisenburg, Richmond.
Dr. Milton Flocks, Colonial Village.
Dr. Frederick V. Gammage, Bluefield, W. Va.
Dr. James A. Gannon, Jr., Arlington.
Dr. William T. Gill, Jr., Washington, D. C.
Dr. Jaye Grollman, Alexandria.
Dr. Clifford Folson Gryte, Franklin.
Dr. William Henry Hanna, Alexandria.
Dr. Jerome Blaine Harrell, Arlington.
Dr. Frederick C. Heath, Christiansburg.
Dr. Isaiah Allen Jackson, Jr. (Col.), Richmond.
Dr. Frank H. Jaklitsch, Fort Belvoir.
Dr. Naomi Kaplan, Arlington.
Dr. William Henry Kaufman, Charlottesville.
Dr. Roy George Klepser, Washington, D. C.
Dr. Henry Kulesher, Arlington.
Dr. Gardner H. Landers, Roanoke.
Dr. Jack Emanuel Lieppman, Richmond.
Dr. Arthur J. Linden, Arlington.
Dr. Harold R. Lipscomb, Tupper Lake, N. Y.
Dr. Thomas Lawinan Lucas, Jr., Alexandria.
Dr. George Macatee, Jr., Fairfax.
Dr. Cameron Farquhar McRae, Jr, Lawrenceville.
Dr. Donald William Mitchell, Arlington.
Dr. Russell W. Moses, Washington, D. C.
Dr. Bernard Donald Packer, Madison, Wis.
Dr. Harry Pariser, Norfolk.
Dr. Nelson Podolnick, Fairfax.
Dr. John Taylor Ransone, New York City.
Dr. John Sturdivant Read, Brooklyn, N. Y.
Dr. Thomas J. Ready, Arlington.
Dr. Margaret Williams Reid (Col.), Suffolk.
Dr. James S. Reitman, Alexandria.
Dr. Robert Wolcott Ripley, New York City.
Dr. Isadore Rodis, Washington, D. C.
Dr. William Hamilton Rodgers, Richmond.
Dr. Alvin V. Rouzer, Arlington.
Dr. Robert Cornelius Rush, Washington, D. C.
Dr. Norman Philip Scala, Washington, D. C.
Dr. Jack Schumacher, Arlington.
Dr. Thomas Williamson Selden, Norfolk.
Dr. James Edward Shull, Lebanon.
Dr. William B. Sims, Washington, D. C.
Dr. William Stringfield Sloan, Petersburg.
Dr. James Reginald Smith (Col.), Lynchburg.
Dr. William Sorrell, Arlington.
Dr. Edward T. Spunt, Lynchburg.
Dr. W. Biven Suter, Washington, D. C.

Dr. Frederick D. Suttenfield, McLean.
Dr. William James Tobin, Washington, D. C.
Dr. James Wallace Todd, Norfolk.
Dr. James Albert Watson, Norfolk.
Dr. Andrew John Welebir, Arlington.
Dr. Emerson Williams, Arlington.
Dr. Rowland Francis Wilkinson, Washington, D. C.
Dr. Frank Louis Williman, Washington, D. C.
Dr. Mary Stuart Wilson, Keysville.
Dr. Samuel Ross Wilson, Jr. (Col.), Norfolk.
Dr. J. Derk Zylman, Arlington.

APPLICANTS WHOSE TEMPORARY LICENSES WERE MADE PERMANENT

Dr. Nelson LeRoy Barnett, Newport News.
Dr. Houston L. Bell, Roanoke.
Dr. Albert H. Bond, Pikeville, Ky.
Dr. Peter Diacoumis Comanduras, Arlington.
Dr. Joseph Cleveland Commander, Martinsville.
Dr. Joseph Jacob Dobkin, Arlington.
Dr. Ruth Paterson Dow, Staunton.
Dr. Louis Aaron Eigen, Arlington.
Dr. Joseph Johnson Eller, Marion.
Dr. Charles Todd Garcia, Cape Charles.
Dr. John Guido Graziani, Farmville.
Dr. Frances Anna Hellebrandt, Richmond.
Dr. Walter Tillou Henderson, Jr., Honaker.
Dr. Frederick Guy Holt, Grundy.
Dr. Alvin Jacob Kistler, Wytheville.
Dr. Robert Winding Lee, Arlington.
Dr. Lee B. Martin, Alexandria.
Dr. William Edward Moody, Scottsville.
Dr. Solomon Granville Moore, Harper's Ferry, W. Va.
Dr. George Osborne Nelson, Jr., Nitro, W. Va.
Dr. Albert Elwood Pagan, Arlington.
Dr. Sandor D. Papp, Alexandria.
Dr. David Pollack, Richmond.
Dr. Charles Preston Pope, Jr., Pulaski.
Dr. Dalbert Joseph Richard, Alexandria.
Dr. Clyde Llewllyn Saylor, Hopewell.
Dr. Helen Marjorie Jacobson Sloan, Richmond.
Dr. George Speck, Arlington.
Dr. Lloyd LeGrand Thompson, Richlands.
Dr. James L. Thomson, Norfolk.
Dr. William Taliaferro Thompson, Richmond.
Dr. Charles Edward Troland, Richmond.
Dr. Clinton Williams Trott, Wytheville.
Dr. Frederick Joseph Wertz, Washington, D. C.
Dr. Thomas Frasier Williams, Arlington.
Dr. James Spencer Wilkinson, Wake Forest, N. C.

The Southwestern Virginia Medical Society

Had an excellent meeting in Wytheville on May the 3rd, with an attendance of seventy-five members in addition to guests. A number of doctors were admitted to membership and delegates and alternates were named for the State meeting at Virginia Beach in October. There was only one change in the program as previously announced—Dr. Robert C. Crawford of Roanoke substituting for Dr. Edward Hanrahan of Baltimore, who unfortunately was ill. Dr. Crawford's subject was the "Rh Factor". Dr. A. P. Jones of Roanoke is president and Dr. A. F. Giesen of Radford secretary.

The Fall meeting will be held in Radford on the first Thursday in October.

Roanoke Academy of Medicine.

At the regular monthly meeting of the Academy on May the 6th, the following officers were elected to serve for the year beginning October 1946: President, Dr. Charles A. Young, and secretary-treasurer, Dr. Wade H. Saunders. Members of the Executive Committee are: Dr. A. M. Groseclose, Dr. Frank Farmer, Dr. Fred Hamlin, Dr. Charles W. Dorsey, and Dr. Chas. H. Peterson. The Judiciary Committee is composed of Dr. J. W. Preston, Dr. J. O. Boyd, Dr. W. R. Whitman, Dr. H. B. Stone, Sr., and Dr. W. W. S. Butler. All are of Roanoke.

The Fourth District and Southside Virginia Medical Association

Met on April 24th at the Raiford Memorial Hospital in Franklin under the presidency of Dr. W. D. Kendig, Kenbridge. The following program was presented: Medical Economics—A review of recent programs of the American Medical Association by Dr. Walter B. Martin, Norfolk; Chest Pain—A Differential Diagnosis by Dr. Clifford F. Gryte, Franklin; and Estrogenic Deficiencies as Affecting Eye, Ear, Nose and Throat Problems by Dr. Morgan B. Raiford, Franklin. Dr. C. E. Martin, Emporia, is secretary of this Association.

Lynchburg Academy of Medicine.

A dinner meeting of the Academy was held on April 8th, at which time Dr. Watt W. Eagle of Duke University Medical School was the speaker. His subject was "Some Problems in Otolaryngology of Interest to the General Practitioner".

The May meeting was held on the 6th and was addressed by Drs. William B. Porter and I. A. Bigger of the Medical College of Virginia. They spoke on the medical and surgical problems involved in congenital defects of the heart.

Dr. Edwin A. Harper is president of the Academy and Dr. H. W. Hollingsworth secretary.

Virginia Peninsula Academy of Medicine.

At the meeting of the Academy on the 20th of May, Dr. Frank R. Lock, professor of obstetrics and gynecology at Bowman Gray Medical School, Winston-Salem, North Carolina, spoke on "Endometriosis". There was an attendance of sixty-seven.

The following officers were elected: President, Dr. Robert H. Wright, Jr., Phoebus, succeeding Dr. Harvey G. Bland of Newport News; vice-president, Dr. George G. Hankins, Newport News, succeeding Dr. Russell Buxton; and secretary-treasurer, Dr. Chester D. Bradley, Newport News (re-elected).

NEWS

Program for Medical Society of Virginia.

Notices were sent members early in May, asking those who wish to present papers at the Virginia Beach meeting to send titles and abstracts to the Society's office by the 15th of June. This is just a reminder as the Committee will prepare the program from titles on hand at that time.

One other suggestion is that those who expect to attend should make reservations promptly by writing The Cavalier Hotel, Virginia Beach, as the capacity of the hotel is limited and there are advantages in staying at the headquarters hotel. When space is not available at the Cavalier, the management will book guests at other hotels which are cooperating.

Veterans Loan Fund.

The Council of the Medical Society of Virginia, at its winter session, auhorized the setting aside of a fund of $10,000 to be used in loans to returning veterans for the purpose of post-graduate education or establishing themselves in practice.

This is to be administered by a committee appointed by the Council and any veterans interested should communicate with the executive secretary of the Society, at 1200 East Clay Street, Richmond 19.

Personnel Changes, State Department of Health.

APPOINTMENTS EFFECTIVE MAY 1:

Dr. V. A. Turner, previously Health Officer for Augusta County, has recently returned from medical service with the Army, and has been appointed Assistant Director of Local Health Services, with headquarters in the Southwest District Office in Abingdon.

Dr. Cameron F. McRae, recently released from medical service with the Army, has been appointed Health Officer of the Russell-Wise Health District.

Dr. Wm. Y. Garrett has been appointed Health Officer of the Norfolk-Princess Anne Health District.

Dr. Thomas Scarlett, formerly Health Officer of Augusta-Rockingham-Harrisonburg Health District, and recently returned from medical service in the Army, has been assigned Health Officer to the Fairfax County Health Department.

TRANSFERS:

Dr. P. M. Chichester, Assistant Director of Local Health Services, was on May 1 transferred from the Southwest District Office at Abingdon to the Central Office in Richmond.

Dr. Linwood Farley, Health Officer of the Russell-Wise Health District, was transferred to the Prince William-Stafford Health District, with headquarters at Manassas, effective May 1.

RESIGNATIONS:

Dr. S. D. Gardner has resigned as Assistant Director of Local Health Services, effective May 16.

Dr. J. McIvor Jackson, Health Officer of the Norfolk-Princess Anne Health District, resigned as Health Officer, effective May 1.

Dr. W. W. Griggs, Health Officer of the Page-Warren-Shenandoah Health District, resigned, effective May 13.

The Virginia Society of Ophthalmology and Otolaryngology

Held its annual meeting at Hotel Roanoke, Roanoke, on May the 4th, under the presidency of Dr. Meade Edmunds of Petersburg. The meeting was well attended and interesting. At the business session, Dr. Thomas Hughes of Richmond succeeded to the presidency and Dr. Fred Hamlin of Roanoke was named president-elect. Dr. Francis H. McGovern of Danville was re-elected secretary-treasurer. The 1947 meeting will be held in Norfolk in May, exact date to be announced later.

Appointments by Governor Tuck.

Dr. I. C. Riggin, State Health Commissioner, and Dr. Julian L. Rawls, Norfolk, president of the Medical Society of Virginia, have been appointed by Governor Tuck as members of the Legislative Commission created by the last General Assembly, to study private organizations which solicit funds from the public for medical care. Previously appointed on this Commission from the Senate and House of Delegates are Senators J. D. Hagood and Lloyd C. Bird, and Delegates J. Maynard Magruder, Henry S. Johnson and John Warren Cooke. Mr. Johnson is the newly appointed Director of Public Relations and Medical Service for the Medical Society of Virgina.

Dr. H. B. Mulholland,

Charlottesville, who attended the First National Rural Health Conference in Chicago in March, was put on the A.M.A. Committee of Rural Medical Service by the Board of Trustees of the American Medical Association. He was also named chairman of the Mid-Atlantic and Southern section of the Rural Medical Service Conference, which comprises the states of Maryland, West Virginia, Tennessee, Kentucky, North and South Carolina and Virginia.

Dr. E. Lynwood Bagby,

Formerly of Richmond but who has been connected for the past year with the Clinch Valley Clinic Hospital at Richlands, located in Pearisburg, the middle of May, and is associated with Dr. W. C. Caudill.

McGuire Hospital,

Richmond, joined with other Veterans Administration hospitals in the observance of National Hospital Day on Sunday, May 12, and at an open house during the afternoon approximately 3,500 persons visited the 1,000-bed institution. The program included music by Sandy Martin's orchestra, and refreshments were served by the American Legion Auxiliary. Religious services were held during the morning. The Red Cross Gray Ladies served as escorts for the open house.

VA has designated McGuire a general medical and surgical hospital, but 200 beds have been alloted for the care of tuberculous veterans from the vicinity of Richmond. Specialized equipment for the care and treatment of veterans with spinal-cord injuries will be provided.

Married.

Dr. Carter Redd Rowe, Boston, Massachusetts, and Miss Mary Skinner Moore, Edenton, North Carolina, April 27th. Dr. Rowe practiced for several years in Fredericksburg before entering the Service. He is now located in Boston.

Dr. and Mrs. Andrew D. Parson of Richlands announce the marriage of their daughter, Alice Frances, to Robert E. Paine, Jr. of Roanoke, on May the 1st. Mrs. Paine is employed as a chemist with the Valentine Company in Richmond, and Mr. Paine is a member of the Senior class in medicine at the Medical College of Virginia.

Dr. Byrd Charles Willis,

Formerly engaged in practice in Richmond but for many years a prominent surgeon of Rocky Mount, N. C., has retired from active practice and is now making his home at Orange, this State.

Dr. Griffith Still Active at 85.

Dr. R. S. Griffith, beloved physician and citizen of Waynesboro, on April 16th celebrated his 85th birthday. He has practiced in the former Basic City and Waynesboro since 1891, and now numbers among his patients the fourth generation in two or more families in Waynesboro. He is also the possessor of four 50-year organization pins—as surgeon for the Chesapeake and Ohio and Norfolk and Western railroads, the 50-year Masonic pin, and another marking the 50th year of the local lodge of Odd Fellows in his city.

We wish Dr. Griffith many years of continued health and happiness!

Appointed to McGuire Veterans Administration Hospital.

Dr. E. M. Ellerson, acting manager, announces that four doctors and one dentist have been named recently to key positions at McGuire Veterans Administration Hospital.

Dr. Benedict Nagler, of Newark, N. J., diplomate of the American Board of Psychiatry and Neurology, has been appointed chief of neuropsychiatric service at McGuire, and Dr. Samuel Richman, of New York City, a member of the American College of Radiology, has been made chief of roentgenological service.

Dr. James B. Funkhouser, formerly of the staff of Southwestern State Hospital, Marion, Va., will serve as assistant to Dr. Nagler, while Dr. Joseph

Krimsky, of Charlottesville, Va., who was an examiner at the Richmond Induction Station during World War II, will be assistant chief of eye, ear, nose and throat service.

Dr. Norval H. McDonald, of Baltimore, Md., chief of dental service at McGuire under Army operation, has been appointed to head the service under VA.

Dr. William Bickers,

Richmond, has returned after six months as acting professor of gynecology and obstetrics at the American University of Beirut, Lebanon. He served at the Near East College, assisting in restoring its operation to a pre-war basis. In addition to teaching, Dr. Bickers held clinics in Damascus, Tripoli, Tehran, and Bagdad.

Dr. B. B. Bagby, Jr.,

Formerly medical director at Pine Camp Hospital, Richmond, has been appointed director of the Negro division of Battey State Hospital, Rome, Georgia. He left Richmond in the fall to become tuberculosis director of the Georgia State Hospital at Milledgeville.

Dr. T. B. Pope

Has been appointed as coroner of the city of Petersburg to succeed Dr. Henry M. Snead who recently resigned. Dr. Pope has been associated with Dr. Snead since March 1st, having come to Petersburg from West Virginia where he had practiced for twelve years. He is a native of Southampton County and a graduate of the Medical College of Virginia in the class of '34.

Dr. Francis N. Taylor,

Recently returned to Petersburg after four years in Service, has been appointed by the City Council of that place as jail physician, also succeeding Dr. Snead, resigned.

American College of Physicians.

At the annual meeting of the College, held in Philadelphia May 13-17, Dr. David P. Barr, Cornell University, New York, was elected President to succeed Dr. Ernest E. Irons of Chicago. Other officers are Dr. Hugh J. Morgan, Nashville, Tennessee, President-Elect; Drs. James J. Waring, Denver, Colorado; A. B. Brower, Dayton, Ohio; and T. Homer Coffen, Portland, Oregon, Vice-Presidents. Mr. E. R. Loveland, Philadelphia, is Executive Secretary.

Home Again.

In addition to names previously published, we have been advised of the return from Service of the following members of the Medical Society of Virginia:

Dr. Charles M. Caravati, Richmond.
Dr. George B. Craddock, Lynchburg.
Dr. J. D. Creger, St. Paul.
Dr. Hal Davis, Roanoke.
Dr. William M. Deyerle, Richmond.
Dr. Jerome Feldman, Richmond.
Dr. Glenn T. Foust, Jr., Norton.
Dr. John E. Gardner, Roanoke.
Dr. J. R. Grinels, Richmond.
Dr. W. G. Hardy, Bedford.
Dr. O. H. McClung, Jr., Lexington.
Dr. Milton Salasky, Norfolk.
Dr. W. A. Seawell, Raven.
Dr. V. A. Turner, Abingdon (formerly Staunton).

New Director at Richmond V.D. Hospital.

Assistant Surgeon Allen D. Miller, U. S. Public Health Service, has been named medical director of the Richmond Municipal Hospital for Treatment of Venereal Diseases, succeeding Dr. E. R. Mautner who has been transferred to Baltimore.

Dr. James Q. Gant,

Class of '35, Medical College of Virginia, and for several years connected with some government service, has located for private practice, with offices at 1726 M Street, N. W., Washington, D. C.

The American Association for the Study of Goiter

Is to hold its annual meeting at Drake Hotel, Chicago, June 20, 21 and 22, under the presidency of Dr. J. deJ. Pemberton of Rochester, Minn. Papers are to be presented at both morning and afternoon sessions on the first two days and dry clinics will be held until noon of the last day. There will be an informal cocktail party and banquet on the first evening. Dr. T. C. Davison of Atlanta, Ga., is corresponding secretary.

Veterans Administration, Richmond Branch Office.

Dr. Daniel B. MacCallum, formerly professor at the medical school of the University of Southern California, has been appointed director of medical services of the Richmond Branch Office, Veterans Administration, according to an announcement by James B. Cress, branch deputy administrator.

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offices throughout Virginia, North Carolina, West Virginia, Maryland, and the District of Columbia will be under Dr. MacCallum's direction. Dr. Wilbur R. Southward will continue as assistant director of medical services.

Commenting on the medical setup, the new director said that more and more doctors are entering VA's new department of Medicine and Surgery but that there are still a number of positions open for qualified men.

The most pressing need, he said, is for physicians to serve on rating boards, which pass on disability claims made by veterans. Each board is made up of a medical, a legal and an occupational member, but no difficulty has been experienced in filling the latter two positions. Physicians, however, are needed for both full and part time work on the boards if the increasing backlogs of veterans' disability claims are to be cleared up. While 18 physicians have been employed as full-time rating board specialists and two part-time, there are at least 20 more needed.

Dr. MacCallum pointed out that increase of the starting salary to $5,180, relaxing of minimum physical standards, and new working hours are among recent changes which should make the rating board positions particularly desirable for older doctors wishing to withdraw from full-time private practice or for those who want to devote only a part of their time to service on the board. Doctors may now serve only a few hours a week on a part-time basis if they desire.

In addition to the rating board vacancies, the new director said there are openings for approximately 170 doctors in hospitals and out-patient clinics in the branch area. Around 40 doctors have been employed full time and 13 part-time since the last of March.

2,000 to Attend College of Surgeons' Assembly.

More than 2,000 surgeons and other doctors of medicine are expected to attend the three-day Assembly of the United States Chapter, International College of Surgeons in Detroit, October 21-22-23.

Among the principal speakers to be heard in Detroit's Masonic Temple will be Mr. Hamilton Bailey of London, England; Dr. Francisco Granã of Peru; Dr. Felipe F. Carranza of Argentina; Dr. Manuel Manzanilla of Mexico; Dr. Wayne W. Babcock of Philadelphia, and many other leading surgeons of the United States.

Dr. Herbert Acuff of Knoxville, Tennessee, is President and Dr. Custis Lee Hall of Washington, D. C., is President-Elect of the U. S. Chapter, International College of Surgeons. Detailed information and copy of the Program may be obtained by writing L. J. Gariepy, M.D., 16401 Grand River Avenue, Detroit 27, Michigan.

Raiford Memorial Hospital Clinics.

The third annual meeting of the summer clinics of this Hospital will be held in Franklin on June 19th, July 24th, and August 28th. The topic for the June meeting will be Problems in Obstetrics and Gynecology, and for July Gastro-Intestinal Diseases.

Lynchburg Tumor Clinic.

The Virginia Cancer Foundation announces the opening of the Lynchburg Tumor Clinic—the ninth of these clinics to be certificated by the Cancer Committee of the Medical Society of Virginia. Medically indigent cancer patients referred to this clinic in the usual manner will be cared for financially by the Foundation. Dr. Joseph Houck and Dr. John W. Devine are co-directors and the Out-Patient Clinic is in the Lynchburg General Hospital.

Dr. George H. Kinser,

Formerly of Waynesboro, has been transferred to Orange, Texas, where he will be with the medical department of the nylon salts plant of E. I. Du Pont.

Dr. Charles W. Scott

Has been appointed as superintendent of Piedmont Sanatorium at Burkeville to succeed Dr. J. B. Woodson who recently resigned. He has been medical director of the institution since 1942.

New Books.

The following are new books recently acquired by the Library of the Medical College of Virginia and are available to our readers under usual library rules:

Armstrong—Bone-grafting in the treatment of fractures.
Bauer—Constitution and disease, applied constitutional pathology. 2nd ed. 1945.
Bowman—Marriage for moderns.
Brain—Diseases of the nervous system. 2nd ed. 1940.
Brookes—Poisons; their chemical identification and emergency treatments.
Burch & Winsor—Primer of electrocardiography.
Burket—Oral medicine. Diagnosis—Treatment.

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Byrd, comp.—Health instruction yearbook. 1945.
Caffey—Pediatrics X-Ray diagnosis.
Cameron—Recent advances in endocrinology. 5th ed. 1945.
Curtis—Textbook of gynecology. 4th ed. 1944.
Dorcus & Shaffer—Textbook of abnormal psychology. 1945.
Fritsch—The structure and reproduction of the algae. v. 2.
Golden—Radiologic examination of the small intestine.
Groff & Houtz—Manual of diagnosis and management of peripheral nerve injuries.
Gumpert—You are younger than you think.
Howell—A textbook of physiology. 5th ed. 1946.
Kirschenbauer—Fats and oils. 1944.
Lange—Handbook of chemistry. 5th ed.
Levine—Clinical heart disease. 3rd ed. rev. 1945.
Lewis & Pasella—Modern trends in child psychiatry.
McCarrison—Studies in deficiency disease.
Millard & King—Human anatomy and physiology. 2nd ed. 1945.
Rahn—Microbes of merit. 1945.
Richardson—Patients have families.
Salle—Fundamental principles of bacteriology.
Sante—Principles of roentgenologic interpretation.
Thorek—The face in health and disease. 1946.
Williams—Leave her to heaven (Novel).
Wiprud—The business side of medical practice.
Wolf—The physician's business, practical and economic aspects of medicine. 2nd ed. 1945.
Wood—Medicology, or home encyclopedia of health.
Wrench—The wheel of health.
Yearbook of dermatology and syphilology. 1945.
Yearbook of general therapeutics. 1945.

Established Hospital for Lease.

A Sanatorium for nervous, mental, alcoholic and drug cases, doing an excellent business, to a reputable physician or medical group. Dr. E. W. Stokes, 923 Cherokee Road, Louisville 4, Ky. (*Adv.*)

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Appointments Available.

An appointment in Eye, Ear, Nose and Throat is available October 1st at the Raiford Clinic, Franklin.

Also available immediately is an appointment in pediatrics.

For further details, address the Administrator, Raiford Memorial Hospital, Franklin, Va. (*Adv.*)

Wanted—

Technician for private practice and internal medicine in Newport News, Va. Address "XYZ", care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

OBITUARIES

Dr. Spencer Glas Gill,

Norfolk, died May 17th, at the age of fifty-eight. He graduated from the Jefferson Medical College, Philadelphia, in 1914 and had practiced in Norfolk for twenty-eight years. Dr. Gill had been a member of the Medical Society of Virginia since 1917.

Dr. John Morgan Biedler,

For many years a practicing physician in Harrisonburg, but for the past year and a half of Fort Lauderdale, Florida, died January the 26th, at the age of seventy-two. He was a native of this State and graduated in medicine from the former University College of Medicine, Richmond, in 1903. He saw service in the army during World War I, was for many years health officer and coroner of Rockingham County, and one of the founders of the Rockingham Memorial Hospital at Harrisonburg. He had been a member of the Medical Society of Virginia since starting to practice.

Dr. Stephen Roszel Donohoe,

Formerly of Norfolk, died at the Veterans Administration Hospital in Washington, D. C., March 13, after a long illness. He was sixty-six years of age, and a graduate in medicine from the University of Maryland in 1902. He had been a member of the Medical Society of Virginia for over twenty-five years.

Dr. Hunter McGuire Williams,

North Garden, died May 14th of a heart attack. He was sixty-seven years of age and a graduate of the former University College of Medicine, Richmond, in 1900. Dr. Williams was formerly a member of the Medical Society of Virginia. A daughter and a son, Dr. John Stuart Williams, of Hopewell, survive him.

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Annual Meeting
Medical Society of Virginia
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July 1946

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GUEST EDITORIAL

The Training of the Graduate Nurse

THERE are many physicians and some graduate nurses who believe that the present policies and practices of the schools, associations, and boards for nursing have brought the profession to a critical cross-road. To continue on the course now being followed will lead to the disappearance of the graduate nurse as we have known her in the past. It is not too late to make a radical revision of the curriculum and restore the training of a graduate nurse to a sane basis. It is evident that many of the nursing educators have not had the vision or desire to produce nurses for the bedside care of the sick. Not many years ago in this State such pressure was brought on the small nursing schools that many were forced to close in spite of the fact that by and large they produced superior clinical nurses and this closure of the schools has been a major factor in the present shortage of nurses.

The solution now offered is to produce two classes of nurses, one with a curriculum more advanced than is now being followed and the other with a training period of only one year. The leaders of the Nurse Cadet Corps have recently envisioned the conversion of the large schools to the training of professional nurses and the smaller schools to vocational nurses. It is our opinion that two classes of nurses are not compatible, that one will fall and the other survive, and that the poorly trained vocational nurse will be the survivor.

The solution, we think, is not too difficult if the authorities in this State will seek a solution for Virginia without influence and pressure from other sources. We propose that the Virginia schools immediately convert to a two year course with substantial reduction of the didactic work. At the same time in the larger schools postgraduate courses should be offered for training in special lines. It would seem evident that a nurse graduating in two years is adequately trained for bedside nursing and would be superior to the one year graduate. For those with superior preliminary training, or desire and ability to specialize, the postgraduate year or years would offer unlimited possibilities.

The advantages of this proposal are:

(1) the shorter period of training and reduction of expense to the pupil would attract larger numbers.

(2) one class of nurse of high quality would be continued.

(3) better specialists would result from the planned postgraduate courses.

(4) the care of the sick would be restored as the primary objective of graduate nurse training.

One of the major objections to be made by the nursing educators is that such a two year graduate would not be recognized by the boards in the majority of other states. The answer to this is simple; if she so desires the nurse can continue her education for another year and thereby become eligible to register in the 38 states which now require three years of training but it is our belief that many other states would quickly fall in line if Virginia would be the pioneer.

The basic law of Virginia and nine other states require only two years for training a graduate nurse and leaves the details of the curriculum to the Board of Nurse Examiners. It is therefore in the power of our Virginia Board of Nurse Examiners to make the change immediately. We request them to seriously consider making this change. It is an opportunity for Virginia to lead the nation out of a critical situation.

HARRY J. WARTHEN, M.D.
CARRINGTON WILLLIAMS, M.D.

People Suffer from 25 Different Knee Disorders.

Estimating that today there are at least 25 distinct knee disorders that have been proved by x-rays and surgery, Philip Lewin, M.D., of Chicago, says that the "efficiency of a person's knee is directly proportionate to his posture, muscle power, ligamentous support, bone structure, and the knee's ability to withstand normal and abnormal strains."

Writing in the current issue of *Hygeia,* health magazine of the American Medical Association, the author describes some knee disorders, injuries and their causes:

"Locking of the knee joint results when some structure gets pinched between the joint surfaces like a monkey wrench in the hinge of a door. The most common causes of locking are: injured semilunar cartilage; loose bodies in the joint; or a pinched fat pad or synovial membrane which encloses the joint.

"Chief infections of the knee are tuberculosis, syphilis, gonorrhea and the ordinary streptococci and staphylococci.

"Obesity may be harmful to the structures of the knee. This harm is greatly magnified if the person is bowlegged or knock kneed or has arthritis.

"Intermittent hydrarthrosis is one of the most unique conditions affecting human beings. Visualize a knee swelling every 11 days regularly for years. No injury; no infection. The routine swelling is usually interrupted during pregnancy and while nursing the baby, only to start again when these incidents are closed.

"It is known that some foods produce irritation of certain knees. This is true in cases of tomatoes and walnuts. Vitamin C deficiency can also cause synovitis or inflammation of the synovial membrane.

"Relation of the foot and ankle to knee disorders has been the subject of controversy. People with knee disturbances have foot and ankle troubles. Undoubtedly flat feet, weak feet, knock knees and bow legs may affect the knee. Correction of the foot and ankle condition is imperative whether or not it bears relationship to the origin of the knee strain.

"Dislocations of the knee are not common but may be serious because of injury to blood vessels."

Treatment of knee disorders may be conservative or surgical, the author states. The former includes rest, elevation, relief from bearing weight, traction, compression, local applications and aspiration of the fluid from the knee cavity.

COMPULSORY FEDERAL SICKNESS INSURANCE*

WALTER B. MARTIN, M.D.,
Norfolk, Virginia.

Progress in the science of medicine and its application to the control and the treatment of disease has been outstanding during the past quarter of a century. The development and utilization of insulin, liver extract, the sulfa compounds, penicillin, plasma, whole blood and now streptomycine has lowered tremendously mortality and morbidity rates. Improved sanitary and public health measures, and more widespread immunization has limited the spread of disease to an extent not previously thought possible. The higher standard of requirements in medical schools, together with more thorough hospital training, has resulted in greatly improving the quality of medical practice. These results are strikingly exemplified by a comparison of the medical and surgical records of World Wars I and II. Death from battle wounds in the last war were slightly in excess of 3 per cent as compared to between 8 and 9 per cent in World War I. According to the Surgeon General of the army, this accomplishment was not so much the result of the use of sulfa compounds, penicillin and plasma as it was of improvements in surgical technique and the availability of large numbers of highly trained, qualified surgeons. Even greater comparative improvement in the rate of death from disease occurred in the last war. With certain notable exceptions, the skilled surgeons, internists and pathologists that made this accomplishment possible were not drawn from government facilities, but were recruited from the ranks of those who had received their training and gained their experience under the free system of medicine that heretofore has existed in America.

In considering the future of medicine in America, we might hope that these great advances in the science of medicine might be further accelerated, that the quality of medical care might continue to improve, and that those forces that have been so effective in the past might continue to control the destiny of medicine in America. This hope may not be realized. The pattern of medicine of the future may well be determined not by the orderly planning of men trained in the science and art of medicine, but by the direction of our political thinking, by whether we adhere to the liberal philosophy that recognizes the rights and dignity of the individual, or succumbs to the present trend toward national socialism with its emphasis on control by the state of the lives and destinies of its citizens. The lines are being drawn between those who believe in the gradual extension of medical care under our present free system, and those that support the revolutionary change that would be brought about by the adoption of compulsory federal sickness insurance. In its broad aspect, the proposal contained in section four of the President's five point program, and in Title II of the Wagner-Murray-Dingell bill to establish compulsory sickness insurance, will not only radically change the practice of medicine, but in the end may profoundly affect our political and social structure. Let us consider the bills now before Congress along with plans that have and are being urged by the medical profession.

In evaluating the several proposals for further extending medical service to the American people, some basis for comparison must be established. There can be little argument over the desirability of giving the people more and better medical care. Discussion centers on methods and procedures. We may well ask ourselves certain questions relative to any plan:

1. Will it increase the distribution of good medical care?
2. Will it improve or deteriorate the quality of medicine?
3. Will it stimulate or retard the advancement of the science of medicine?
4. Will the cost be within the ability or willingness of the people to pay?

It may be noted that one question is not asked—will it redound to the profit or loss of doctors as individuals? I do not believe that we as physicians can afford to approach this problem from the standpoint of our own selfish interest. Medicine with its manifold benefits belongs to the people. We are only the purveyors of it. It is true that as members of a learned profession we are the only ones competent to pass on the quality of what we produce. For this reason, the obligation rests heavily upon us to view the problem abstractly, and to render judg-

*Read before the Norfolk County Medical Society Spring 1946.

ment uninfluenced by personal considerations. If it can be shown that by changing our system of practice the general welfare of the people will be advanced and the progress of medicine sustained and forwarded more effectively, then the system should be changed.

We as physicians are particularly concerned with the quality of medicine. I have said that the physician is the only one who can correctly evaluate its quality. I do not say this arrogantly, but with assurance that it is true. Some years ago, I heard one of the leading advocates of socialized medicine state to a large audience in this state that he was interested only in the distribution of medicine and not in its content. Only profound ignorance of the difference between good and poor medicine would allow anyone to make such a statement. Medicine is both an art and a science. Proficiency in its practice is gained only by arduous years of study and training. Its application to the correction of human ills is not simple, but presents many difficult and confused problems. Maintenance of high ethical and moral as well as professional standards is necessary if people are to be served. The relationship of the physician to his patient must be personal and confidential if the total sum of human woe is to be lessened.

With these thoughts in mind, let us examine some of the proposals that have been made and consider whether they will extend a higher quality of medical care at a bearable cost and promote the further advance of the science of medicine. Most of you are no doubt familiar with the President's five point program, the Hill-Burton bill and the Wagner-Murray-Dingell bill. On November 19th, the President presented to the Congress his health program for the nation consisting of five main items as follows:

1. Federal grants in aid to states for construction of hospitals, diagnostic centers and health centers.
2. Expansion of public health service, and extension of maternal and child health service.
3. Federal grants for medical education and research.
4. The setting up of a federal compulsory sickness insurance system.
5. Expansion of our present social security system to provide compensation for loss of wages from sickness and disability.

These are not new concepts. All of them have been included in the several bills previously presented to Congress, e.g., the earlier Wagner-Murray-Dingell bill, the Pepper bill and the Hill-Burton bill. The medical profession has endorsed them in principle except the plan for federal compulsory sickness insurance, although it objects strongly as to how certain of them are to be implemented.

The proposal relative to construction of hospital and related facilities as embodied in the Hill-Burton bill has the wholehearted approval of the American Medical Association and the American Hospital Association. This bill has passed the Senate and is pending in the House. It provides seventy-five million dollars annually over a period of five years to aid the states in extending hospital, laboratory and health center facilities in areas where the need can be demonstrated. It provides for a careful survey by the states to determine such needs and a preliminary sum of five million dollars to aid in making such surveys. Under the terms of this bill, there would be a gradual and orderly development and extension of medical facilities in areas where the need exists. It should be possible to recruit and train personnel to operate these facilities in keeping with their development. This is a forward looking, progressive measure which should aid particularly in the solution of the problem of rural medicine.

The second Wagner-Murray-Dingell bill, S-1606, covers the second, third and fourth points in the President's program and was presented to the Congress the day following the President's address. The fifth point in reference to compensation for loss of wages from sickness or disability has met with no opposition from the medical profession, and will not concern us today.

Title I of S-1606 provides grants to states for health service. Part A of Title I is concerned with grants to states for public health service—particularly for the prevention, treatment and control of tuberculosis; the prevention, treatment and control of venereal disease; the extension of public health work in areas not covered; and the training of personnel. This bill provides for the administration of these funds by the Surgeon General of the Public Health Service subject only to the Social Security Administrator. The Surgeon General is provided with a technical advisory council without policy making power, and appointed by himself. Part B of Title I has to do with grants to states for maternal and child health service. It provides that where

facilities are furnished under the plan, they shall be available to all mothers and children who elect to participate. The crippled children program is also made available to all crippled children regardless of financial status. This service is administered by the chief of the Children's Bureau subject only to the Secretary of Labor. Again, there is a technical advisory council without policy making power and appointed by the same authority that it advises. Part C of Title I provides for grants to states for medical care of needy persons. This is administered directly by the Social Security Board in cooperation with the chief of the Children's Bureau and the Surgeon General of the Public Health Service.

Title II—The heading under this title is "Prepaid Personal Health Service Benefits". This is another way of saying compulsory federal sickness insurance. This insurance covers the following groups:

1. All employed individuals, including self-employed.
2. All of their dependents.
3. All individuals entitled for any period to monthly benefits under the Social Security Act.

It is administered by the Surgeon General of the Public Health Service under the supervision and direction of the Federal Security Administrator. Under its provisions, the Surgeon General will appoint state and local committees, or boards, to aid in the administration of this law.

The Surgeon General will appoint a sixteen member national council whose duty it will be to advise him.

Services which shall be deemed to be specialist or consultant services will be so designated by the Surgeon General.

Specialists or consultants will be those so designated by the Surgeon General.

The Surgeon General may fix the number of patients that can be served by one practitioner.

This title undertakes to provide full home and hospital, medical, surgical, dental and nursing care for most of the people in the United States, and without regard to income or financial status. It is set up under the complete control of the Surgeon General of the Public Health Service subject only to the Social Security Administrator.

In contrast The American Medical Association by direction of its House of Delegates and acting through its Board of Trustees and its Council on Medical Service and Public Relations urges:

1. A reasonable standard of nutrition, sanitation, housing, clothing and recreation. It is obvious that much of disease is due not to poor medical care, but to low general standards of living based on economic deficiencies. If we are to build on a broad base there must be a gradual adjustment of these factors. Nearly 50 per cent of our population is without benefit of sewerage and in some states as high as 78 per cent. A large percentage of rural dwellers are without a protected water supply. Prior to the war, over 18 per cent of all dwelling units in the United States were substandard. This varied in different states and reached a peak of over 39 per cent in one state. Dietary deficiencies are common, especially in certain areas, and there are also deficiencies in clothing and recreational facilities. That these factors significantly affect our disease rate cannot be questioned.

2. The provision of preventive medical service through professionally competent health departments with federal and/or state aid to localities unable to provide such service. The medical profession was instrumental in establishing the first public health service, and has constantly and consistently urged the extension of this service so as to provide the maximum preventive care for all of the people. Governmental aid is needed to extend public health service into many areas in this and other states not now covered, and to further develop and perfect existing services. Organized medicine insists that public health units be headed by professionally qualified men and that they remain free from political control. The care of the sick is, however, not a function of health departments and the line of demarcation between preventive and therapeutic medicine should be strictly maintained.

3. That medical and hospital care be provided for the medically indigent through local, state and federal funds. These funds should be administered by local agencies, public or private. It is to the credit of this community that such a plan has been working well here for more than ten years. Our local hospital association receives funds from several political subdivisions and from these funds reimburses the hospitals for the care of needy patients. It undertakes to act as a central admitting office and through its social workers determines the eligibility for public assistance of those that apply for free

hospital care. State funds are now available to communities on a matching basis to further extend the care of the medical indigent.

4. That procedures established by modern medicine for advice to prospective mothers and for adequate care in childbirth, and for the care of the growing child be made available to those unable to pay by means of local, state or federal funds. Again, these funds should be administered by local agencies. The American Medical Association disapproves the provisions of the Pepper bill for extending such service under federal direction to all mothers and children regardless of ability to pay and the extension of the state of infancy to twenty-one years.

5. The provision of hospital, diagnostic centers and health centers where the need can be shown to exist. These should be established and operated by local organizations and should be financed by local funds as far as possible. When, after study by competent groups, needs are shown to exist beyond the ability of the locality to meet them, state or federal funds should be made available. Proper dispersal of good medical facilities is a prime requisite for a better distribution of good medical care. Administration should be local with the state and federal governments establishing the standards. The Hill-Burton bill, which provides a plan and the funds for such extensions of medical facilities, has the full backing of the organized profession.

6. The establishment of voluntary non-profit prepayment plans for both hospital and medical care. At present about one-third of our population, (40,000,000) are covered by some form of health insurance. Approximately 19,000,000 are covered under the Blue Cross Plan. The Committee on Public Relations and Medical Care and the Board of Trustees of the A.M.A. have endorsed the principle of voluntary prepayment for medical care, and have granted the Associated Medical Plans, Inc., very substantial sums with a view of furthering its work. Associated Medical Plans, Inc., will aid in establishing new plans, support plans already in operation and act as a national clearing house for coordinating the various state and local plans. It is felt that through this agency a tremendous impetus will be given to voluntary non-profit health insurance, and that the problem of writing national business organizations can be solved. The Board of Trustees of the A.M.A. has established standards of acceptability for voluntary plans, and will give official recognition to all plans meeting these requirements. These plans may permit the coverage of the medically indigent group for both medical and hospital care by purchase of policies for such individuals by local, state or federal governments.

7. Medical care, including hospitalization, for veterans. The A.M.A. supports the plan of General Hawley to provide medical and hospital care for veterans as far as possible in their own locality and by physicians of their own choice. Already, certain states, notably Michigan and New Jersey, have made agreements with the Surgeon General of the Veterans Bureau for carrying out such a program.

8. A National Science Foundation for promoting the science of medicine. This is a continuation in principle of the National Research Council which rendered such great service during the war. The A.M.A. is opposed to setting up this foundation under a dictator with an advisory council with power only to advise. It is strongly felt that the Council or Board should exert control over the administrative head of the foundation, and should determine policies.

9. That voluntary philanthropic health agencies be encouraged.

10. That widespread education in field and public health and disease prevention be encouraged and stimulated in every way. Many of our difficulties arise from ignorance on the part of the laity of what constitutes good medical care and how it may be produced.

These are the proposals and plans of the medical profession. They are not in essential conflict with the Hill-Burton bill or of certain provisions of the original Wagner-Murray-Dingell bill and some of the President's proposals. They are, however, sharply in opposition to all plans for national compulsory insurance, and all proposals that tend to set up under the federal government control over the practice of medicine.

Time does not permit full discussion of all of the reasons for this opposition, but some of the points may be briefly considered.

If medical service were a commodity that could be produced on an assembly line, packaged and delivered like a commercial product, a national compulsory insurance plan might be the ideal medium for such distribution. Medical care, however, is to

a considerable extent intangible. To be sure, facilities are needed, but more than that the body of good medicine depends upon the character, integrity and devotion of its practitioners, and the confidence of the patient in his advisor. A great impersonal organization can distribute medical care, but it will be a diluted and debased article. The belief held by many otherwise well informed people that providing good medical care is merely a matter of multiplying medical equipment and facilities is simply not true.

The words *adequate* and *inadequate* are frequently used in reference to medical care, but no one has yet satisfactorily defined adequate medical care. Surveys have been made of our medical resources by certain interested organizations and conclusions drawn on the basis of insufficient data. One of the most ambitious surveys was made by the Committee on the Cost of Medical Care for the American People. In publication No. 26 of this committee it is stated that 9.8 per cent of the sick receive no medical care. When one examines their definition of an illness, however, the shock of this statement is softened. An illness is defined as "any disorder which wholly or in part disables an individual for one or more days, or an experience for which medical service of any kind is received, or any condition, symptom or disorder for which drugs costing fifty cents or more are purchased." It is obvious that adequate medical care involves many things that cannot be catalogued by untrained investigators standing on door steps. After all, adequate medical service, like adequate food, adequate shelter, adequate clothing and adequate recreation is a relative matter and can best be judged by the quantity and quality of medical service received by people of other civilized nations. By every standard, the American people receive the best medical care of any nation in the world. This statement is borne out by both morbidity and mortality statistics. Comparison with England and Germany are to the point since Germany embarked on a program of socialized medicine under Bismarck in the eighties and England on a modified form more than thirty years ago. These two highly industrialized nations with homogenous populations and a high degree of general culture have not been able to equal the record of free medicine in the United States. This in no way means that our present system of practice is perfect or that there is not room for vast improvement. It does mean, however, that any proposal to socialize medicine in this country should be subjected to critical analysis.

Much use has been made of the figures on draft rejections as an argument for the need of a system of socialized medicine. The President in his address refers to the nearly five million rejected. The actual figure is 4,217,000. Of this number, 701,700 were rejected for mental disease and an additional 582,100 for mental deficiency. Over 900,000 additional rejections were based on blindness, deafness, mutism, loss of limbs, congenital deformities or skeletal defects, congenital eye defects and similar conditions largely non-remedial. This leaves a net residue of approximately two million—quite different from the nearly five million quoted. This last figure is by no means inconsequential, but it should be remembered that thousands of those rejected would have been capable of rendering effective service under a less inelastic military system, and are destined to comfortably live out a normal life expectancy as useful and productive citizens.

In 1932 the survey made by the Committee on the Cost of Medical Care for the American People estimated the total cost as $3,650,000,000. Of this, $485,000,000 was spent on cultist or for the purchase of patent medicine. Of the three and a quarter billion left, less than 30 per cent represented professional fees. The remainder covered the cost of dental and nursing care, hospital service, drugs and similar services. What will be the cost of federalized compulsory sickness insurance? No one actually knows, but it probably will be in the neighborhood of eight to twelve billion dollars per annum. The proponents of the Wagner-Murray-Dingell bill carefully avoided in drawing the bill any reference to cost or to how the cost is to be met.[1] It is generally considered that the money will be raised by some form of payroll deduction. The amount of this is variously estimated as from 4 to 6 per cent. This will be applicable to about seventy million workers. In view of past experience, it is improbable that this will come out of the pockets of the workers or the profits of the employer. The worker will demand an increase in wages so as to provide the same or higher take home pay, and the producer will pass the cost

1. More recently in discussing this bill, Senator Wagner has suggested a tax of 3 per cent on payrolls equally divided between employer and wage earner; the sum thus raised to be supplemented by appropriations from general funds.

on to the consumer in the form of increased prices. The consumer will be compelled to meet this new tax burden of 4 to 6 per cent. The cost of medical care for the American people will have been quadrupled to furnish care for the employed group only. The unemployed, the unemployable and the whole group of medical indigent are not provided for under this title. The American people will have to dig still deeper in their pockets to care for these other groups. It is doubtful if this country can afford such a medical bill plus all these extras.

Payroll deduction is an attractive and seemingly simple method of raising funds. It permits no evasion of the tax. It does not, however, provide a stable source of revenue. During depressions with falling wage scales and unemployment, revenue from such a source will fall. It is exactly at such a time, however, that the greatest demands will be made on the medical services provided. Economies will become necessary, and we can be sure that they will not be made first in the administrative overhead.

If the money can be raised, will it—except for a reasonable overhead—be spent for medical care? Experience in other countries suggest otherwise. A swarm of new government employees will come into existence, boards, inspectors, recorders, clerks and stenographers until the cry of the sick is submerged in the rattle of the typewriters.

Under this bill the control of federal funds is vested in the Surgeon General of the Public Health Service. True, he will have an advisory board, but this board is appointed by the same authority and has no directional power. The medical profession will have only a minority representation on this board. We all respect the ability and integrity of the present Surgeon General of the Public Health Service, but we have no way of evaluating his successors, nor the amount of political pressure to which they will be subjected.

The medical problems and medical needs in different states vary widely. South Carolina and South Dakota, New York and New Mexico have entirely different problems. It is the conviction of the medical profession that local situations can be best understood and met on the state and local level.

This bill proposes to release the worker and his family of all responsibility for their health and medical welfare. This is another great step toward complete social security say the social dreamers overlooking the fact that it is another great step away from personal liberty and toward dependency on the federal government. Security can only be gained at the expense of liberty. The perfectly secure individual is the life termer in a well-ordered penitentiary.

Title II of the Wagner bill proposes a tremendous expansion of medical service without defining the need, or even attempting to estimate the cost. The proponents of this measure display little knowledge or concern as to what are the components of good medicine or of what are our relative medical needs. Aside from objections to the Wagner bill on medical grounds, its greatest danger lies in its effect on our political life. It will create another huge fund to be expended by agents of our central government. It will call into being another great group of government workers dependent upon these agents for their daily bread, and it will enthrall one of the few remaining large groups of educated free men.

The American Medical Association, representing through its House of Delegates over 125,000 physicians, has proposed and is urging plans for extension of medical care to the American people on a state and local level—plans that will leave to the individual freedom of choice and to the profession the opportunity to continue the great expansion of the science of medicine that has made American medicine outstanding in the world in this generation.

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THE DIAGNOSIS OF RESPIRATORY ALLERGY

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The purpose of this paper is to emphasize the necessity of working up cases of respiratory allergy in a thorough manner. We are dealing with a phase of medicine where the finding of the etiological agents is essential to the ultimate relief of the patient. Haphazard study and treatment are necessarily going to end in unsatisfactory results both for the patient and the physician. On the other hand, a formulated plan based on a thorough understanding of the basic principles of allergy will elucidate problems which in reality are relatively simple. Lack of such a plan and the enthusiasm of the doctor and patient to carry out the plan will result in failures in cases where the etiological agents are obvious if only looked for.

With this in mind, it should be clear that there is no room for anything but a thorough study of the allergic patient. It is true that in many cases of seasonal hay fever and asthma, after a short history and physical examination together with a few skin tests, the physician can outline a schedule of therapy and obtain excellent results without further ado. But there are many cases that superficial diagnosis will result in incomplete or incorrect handling and, in the end, the patient notes little or no relief from his allergic symptoms. It is therefore imperative for most suspected allergic patients to have a thorough history taken and a thorough physical examination performed together with any necessary laboratory data. I might add that it is essential for every man doing respiratory allergy to be a good internist.

DIFFERENTIAL DIAGNOSIS OF ALLERGIC FROM NON-ALLERGIC CONDITIONS

This is not always a simple matter and cannot be determined by doing a series of skin tests alone.

1.—*Bronchial Asthma*—

A patient of mine, fifty years of age, had been treated for several years as a case of allergic bronchial asthma because of nocturnal attacks of dyspnea and wheezing. His relief was minimal. On physical examination his blood pressure was found to be 240/130 and therapy against this phase of his illness with rest, phenobarbital and nitranitol gave a fair amount of symptomatic relief without an appreciable constant drop in blood pressure. There was no allergic history and the results of the skin tests were really not conclusive when taken with the history and physical examination. It is my feeling that allergic therapy in this type of case is not particularly good medicine.

Asthmatic breathing with wheezing may not be allergic asthma and in people over 40 years old frequently is not. Hypertension and luetic heart disease may cause a so-called "cardiac asthma" with typical wheezing. Aneurysm, bronchogenic carcinoma, hyperthyroidism, hysteria and psychoneurosis may all cause attacks of dyspnea and at times wheezing. In children, an acute infection with bronchiolitis may cause typical and generalized wheezing in the chest which is really an asthmatic type of bronchiolitis and not true bronchial asthma. With the subsidence of the infection, the so-called "asthma" clears up, but may return if there is a new acute infection. Foreign bodies in the respiratory tract may also cause attacks of dyspnea and wheezing. It would be tragic to call such a case bronchial asthma, perform skin tests, and start treatment on this basis.

A complete physical examination together with any necessary laboratory data and x-rays will solve a number of problems which may remain a mystery otherwise.

2.—*Hay Fever and Perennial Vasomotor Rhinitis*—

The differential diagnosis between the allergic and the infectious states is not always an easy matter. The two may be combined. The allergic state may precede the infectious state, or follow it. In such a case maximum relief can be obtained only by handling the case from both points of view at the same time.

A typical, pale, edematous, nasal mucosa when seen should put the attending physician on guard. It must be remembered, however, that the typical nasal mucosa may not be seen, and yet the condition still may be allergic.

Nasal and sputa smears for eosinophiles and neutrophiles, x-rays of the sinuses and chest, complete x-rays of the teeth as part of the dental examina-

tion, chemical and microscopic examination of the urine and complete blood count will go far in the establishment of a correct diagnosis.

If the physician in doing the allergic work-up will keep in mind the classical characteristics of allergy, he will find the problem much easier. The sudden onset, short duration, sudden offset, symptoms brought on by a specific exciting agent and relieved by removal of the offending agent, reaction to epinephrin, eosinophilia in blood and tissues, and family history of allergic disease are the classical characteristics which will help tremendously in making a differential diagnosis. Of course all these characteristics may not be present in any one case, but the more that are present, the more certain is the diagnosis of an allergic state.

SEARCH FOR THE ALLERGENIC AGENTS

When a diagnosis of an allergic rhinitis or bronchial asthma is made, only a part of the problem is solved. The next step is to find the allergenic agents responsible for the present condition. Again, it must be emphasized, there is no room for halfway measures in the diagnostic studies and therapeutic program for the management of an allergic individual. The allergist must be a first rate detective, and absolute cooperation of the patient is essential. But this is not difficult in the average case and does not take as long as one might think if a regular program is followed.

HISTORY

This is the first and most important part of this phase of the diagnostic study. It is obtained in part in the first few interviews and later during the course of the observation. A diary of the patient's diet and activities should be included as part of the history. In this account it is well to record the daily diet of the patient, any unusual activity, and the time, date, duration and severity of the allergic attack. It is a frequent occurrence that such a diary when analyzed will reveal the chief offenders when other methods have failed.

At the first interview, the usual medical history, including family history and past medical and surgical illnesses, is obtained. This should also include such facts as venereal, social, occupational, menstrual and obstetrical histories. It must include a complete story of the present illness with symptoms and how these have progressed. This is followed by a careful allergic history. Important questions in this history are as follows:

1.—*Initial Onset of the Condition*—

This includes the age of the patient and time of the year when the condition was first noticed. It should go all the way back to the time of the earliest symptoms no matter how mild. An onset in childhood usually starts with a food allergy. Subsequent allergies develop on top of that. An onset in one of the pollen seasons suggests the nature of the pollens which first caused the allergic state. It is a general rule that untreated allergic states tend to become more severe and difficult to handle as time goes on because of the addition of sensitivities to more and more offending agents.

2.—*Seasonal Incidence*—

It is important to determine the seasonal incidence or seasonal exacerbation of the allergic condition in question, as this gives an important lead to the nature of the offending agents. The seasonal manifestations of an allergic state will determine the nature of the allergens used in treatment. Thus skin sensitivities to trees whose pollination period is April or May are not causative factors in patients whose symptoms are from August 15 until frost.

3.—*Freedom Between Attacks*—

4.—*What Aggravates the Condition?*—

Many patients will accuse chilling, nervousness and respiratory infection. All of these factors may and do play a part in some cases, but it is not to be forgotten that there is usually a definitely allergic basis underneath. The case is frequently a subclinical sensitivity which, by the lowered resistance of infection, precipitates an allergic state. Here the exciting factor is a physical agent, but the basis is a true allergy.

This same state of affairs is frequently found with infection. Infection may or may not be a basic cause of an allergic condition. It, too, may be an exciting factor, lowering resistance so that a subclinical sensitivity shows up.

5.—*Climate Factor*—

In the military service this factor is of tremendous importance. Definite statements as to the effect of warmth and cold, wetness and dryness are extremely valuable historical notes which aid in evaluating the full story of any allergic case.

6.—*Geographical Location*—

This may mean climate, street, home or even a single room. Questioning as to whether attacks are worse indoors or outdoors is important under this heading. Patients sensitive to house dust and feathers are naturally worse indoors than outdoors.

7.—*Time of Day Attacks Are Worse*—

Most pollen allergies are worse in the morning and evening. Patients with intrinsic allergy have constant complaints during the day and night. Patients sensitive to feathers or other parts of bedding are worse at night.

8.—*Duration of Attacks*—

Pollen allergy is usually of short duration; food allergy is usually of much longer duration. Any patient, previously well, who presents an allergy of 3-5 days' duration, should be routinely suspected of having a food allergy. If a patient states that he has eaten a known offender, he can expect to have trouble which may last as long as 5 days. This may be explained by the long interval of time between the ingestion of the food and its complete elimination. The attacks usually begin one or more hours after ingesting the offending agent. An infectious allergy, too, gives prolonged attacks.

9.—*Family History*—

This is an important question because those with a family history of allergy have a tendency to be allergic themselves. An allergic family history should include all blood relatives, aunts, uncles, cousins, parents, siblings, and grandparents.

10.—*Occupation of the Individual and Members of the Family*—

11.—*Diet*—

This may give important leads. It may be necessary to give the patient a diet to start with. This may be of several kinds.

(a) Elimination diets of Rowe.
These are several diets which may be interchanged if they are not satisfactory after about a week.

(b) Basic diet principle.
The diet is brought down to a few relatively non-allergic substances with no attempt to make a balanced diet. For example, I have made a complete schedule consisting of nothing but tea, carnation milk, rice, sugar, rye crisp, and jello. Then when the attacks were under control I added one food at a time in large amounts twice a day. If no attacks ensued after a few days' trial, a second food was tried. The usual offenders, whole milk, fish, eggs, chicken, meat, chocolate, spinach, pork, orange, tomato, nuts, and skin positive foods were left until last.

(c) Planned diet based on the history, skin tests, and knowledge of the most common offenders.

12.—*What Does the Patient Think Is the Cause?*

13.—*What Gives Relief?*

14.—*Miscellaneous Questions Pertaining to the Leads Already Obtained by This Time*—

Social history may be important especially where there is a psycho-neurotic background. A very good analysis of history taking in allergy can be found in the account of Swineford & Weaver.

PHYSICAL EXAMINATION

A thorough physical examination is essential to a good work-up. A careful scrutiny of the eyes for conjunctival injection, lacrimation and evidences of itching may give a lead toward the symptoms of hay fever or other ocular pathology. The reaction of the pupils to light and accommodation may suggest the diagnosis of syphilis and possibly help rule out an allergy. During the nasal examination any evidence of polyps, paleness, edema or bogginess of the nasal mucosa should be noted. A careful evaluation of the physical findings in the heart and the blood pressure must be included to rule out cardiac pathology and hypertension causing a so-called "cardiac asthma" which must be differentiated from a true allergic bronchial asthma. It may be necessary in some cases to have an electrocardiogram taken. The further examination of the chest for evidences of emphysema and the typical expiratory sibilant and sonorous rales must be included in any thorough physical examination.

At this point it must be emphasized that a complete physical examination of all systems is necessary to rule out non-allergic conditions. This examination may also bring to light other allergic shock organs present in the same patient with respiratory allergy. It should be noted also that a dental consultation with full mouth x-ray is an important part of this physical examination. Unfortunately the dentist cannot always pick up an abscessed or devitalized tooth on oral examination and without

a full mouth x-ray, foci of infection in the teeth will be missed no matter how careful the dental examination.

LABORATORY DATA

1.—*Nasal and Sputa Smears for Eosinophiles and Neutrophiles—*

A high percentage of eosinophiles suggests an allergic basis for the respiratory complaint; a high percentage of neutrophiles indicates an infectious basis of the complaints.

2.—*X-Ray of the Sinuses and Chest—*

X-ray of the chest will enable the diagnostician to rule out other organic diseases as a cause of the chest findings. These conditions include enlarged heart, tuberculosis, foreign body, aneurysm, large mediastinal lymph nodes, etc.

X-ray of the sinuses is necessary in the search for foci of infection and to rule out organic changes in the paranasal sinuses. It must be remembered that an allergic nose may predispose to sinus infection and then the individual may become allergic to the subsequent infection. Likewise, a previous infection of the paranasal sinuses may cause a bacterial allergy in the nose as a superimposed factor. In either case, the end result is a vicious cycle and both factors must be understood and controlled for maximum relief.

3.—*Complete Blood Count and Urine Examination for Sugar, Albumen, and Microscopic Examination.*

4.—*Allergy Testing.*

5.—*Any Associated Study Indicated by the Previous History and Physical Examination.*

ALLERGY TESTS

The main tests are scratch, patch, intradermal, ophthalmic and passive transfer. Of the intradermal and scratch, the former is more accurate but far more dangerous. It should be performed with dilute extracts at first and not too many tests at once. When a reaction occurs, a tourniquet should be placed above the site of the infection and epinephrin should be given in the other arm.

Reactions to Skin Tests—

A strongly positive reaction is a large area of redness together with a wheal and pseudopods. Generally there is itching and not uncommonly the whole arm will swell up in the very marked cases. The reactions are usually graded negative to 4 plus, a redness and small wheal being 1 plus.

Interpretation of Skin Tests—

An interpretation of the findings of the skin test examination should be made in the light of the other findings in the case. Important points to remember in this connection are as follows:

1.—The reaction of the skin varies in even the same patient in different locations on the body. There are refractory areas on the skin of some individuals which may give a false negative reaction. Where a negative reaction is obtained and the substance in question is suspected, it is wise to repeat the test one or more times.

2.—Positive tests should be repeated for verification to obviate the possibility of a skin reaction to the irritant qualities of the solution rather than to the antigen itself.

3.—Careful analysis of the results of the skin tests

(a) Some individuals will seem to react with 3 or 4 plus to almost all tests you use. It is possible that the results may be as true as they seem, but not infrequently this is a reaction by the skin to any irritant. To overcome this factor, it is wise to use several controls, and, if necessary, a Passive Transfer Test.

(b) Some individuals will react with only 1 or 2 plus response. These should not be disregarded, as sometimes this will be the only reaction noted, and yet the person has a strong sensitivity to the agent. If it is recalled that skin tests represent a reaction to the reagins in the skin and that these reagins may be minimal in the skin while marked in another tissue, this may be understood.

(c) A positive reaction on the skin may represent a past sensitivity or a present or future sensitivity. Likewise, there are many antigens which are group specific. Thus 4 or 5 agents may give positive reactions and yet only one may be the offending agent. Therefore, it is important to divide the reactions into clinical and non-clinical positives. In my opinion, however, when treating a perennial allergy in particular, all positive reactions should be considered in making out the therapeutic program.

Those substances which can be removed from the patient's environment (e.g., foods, inhalants, drugs) should be eliminated at the start of the therapy. Later, when the allergic condition is under control, the suspected agents may be added one at a time. At the same time desensitization should be instituted against those antigens which are clinical positives and against which desensitization is known to be of value. There is no need to treat a case with a positive reaction on the skin if there is obviously no clinical sensitivity.

(d) Some allergists send out reports of skin tests in chart form—recording results in pluses. This report is of no value without an interpreation of the other findings of the case.

(e) Number of skin tests necessary.
I do not believe that more than 50 tests are necessary except in unusual circumstances. The grasses are generally considered to be group specific for the antigenic protein. Plantain is not a grass and therefore has a different antigenic protein. Thus, testing and treatment with timothy and plantain covers practically all the pollen in the so-called grass season from about May 15 to July 15 in most parts of the country. Therefore, there is no need to test to red top, Johnson grass, Bermuda grass, red vernal, etc. Likewise, giant and low ragweed have the same protein antigen, so it is only necessary to test and treat to one or a mixture. Goldenrod has been frequently accused by the layman. It has a heavy sticky pollen, so does not carry far and thus is an infrequent cause of trouble. There is no need to test for this routinely. In this connection, it should be recalled that for a pollen to be a frequent cause of trouble, it must be light in weight, and produced in abundant quantities; there must be wind to carry it great distances; and it must carry the offending antigen. Trees are the other main causes of seasonal allergy but are not as frequent as the grasses and weeds. In any one area, a study of pollination calendars will help in the finding of pollens in that area. An excellent chart may be found in Urbach's book "Allergy."

Not a great number of food tests are necessary because this information is better obtained from diary and diet. The usual foods should be tested for, but it is not necessary to test to more than 25, except in unusual cases. Milk, eggs, chicken, meat, fish, shell-fish, chocolate, cornmeal, beans, peas, spinach, orange, tomatoes, and wheat are common offenders and should be tested. It is also wise to test to other less common offenders which are common edibles in any one section of the country. The inhalants usually used are dust, cat dander, dog dander, horse dander, rabbit dander, feathers, cottonseed, flaxseed, kapok, silk wool, pyrethrum, orris root, and tobacco. It is not necessary to test for molds routinely.

(f) At times the skin tests may be negative, especially with foods, and yet there may be a strong sensitivity present. Thus, negative reactions to foods in particular should not be disregarded if a clinical history exists. In fact, the clinical history should be regarded as more important and feeding tests carried out for verification if necessary.

Pollen Diagnosis for Treatment

A diagnosis with positive skin tests to pollen and a positive history must be further subdivided for treatment. Allergic subjects have varying sensitivity on the skin, usually classified as "A", "B", "C", "D", the latter being the least sensitive. Here a discussion of standardization is imperative. There are three main methods—the total protein, protein nitrogen and the pollen count. The latter is unsatisfactory because it does not measure the excitant itself and this is variable in the pollen. The other two methods are good, but it is wise to pick one and stick to it.

In the protein nitrogen method, 0.00001 mg. of protein nitrogen is labeled one protein nitrogen unit. With this standardization, tests are performed to 10, 100, 1,000, and 10,000 units of the pollen by intradermal method, but using the weaker strengths first.

A 4 plus reaction to 10 units is class "A"; to 100 units is class "B"; to 1,000 units is "C", and to 10,000, class "D". Then charts are available which give the testing schedule for each class, beginning with about 5 units for class "A", 20 units for class "B", 30 units for class "C" and 50 for class "D". These usually go up to 1,000 units, 5,000 units, 14,000 units and 14,000 units as the maximum doses, respectively. These charts are only guides, however, and subsequent doses and the maximum doses depend on the clinical response of the patient and the reaction.

When using these potent extracts, the allergist must know his extracts and the dosage he is giving. In the event of a reaction, a tourniquet should be applied above the site of the injection so as to impede the venous return. At the same time, epinephrin is given in the opposite arm. The next doses must then be smaller than the one that caused the reaction. Further increases may not be necessary or should be done carefully and slowly.

Seasonal Allergy

It is best to do routine testing in seasonal allergy cases to get the most favorable result. It is not infrequent that an individual with only seasonal allergy will have a subclinical allergy all year round and when the particular season occurs, the allergy cannot be controlled by pollen treatment alone. Here the other factors must be controlled during the season.

Comment

No attempt has been made in this paper to include all phases of the allergic diagnosis of the allergic disease. An attempt has been made to bring out the important facts which must be considered in most cases. It must be emphasized that the handling of an allergic case is not difficult but must be meticulous if the best end results are to be expected. First, it is important to separate the allergic from the non-allergic states; secondly, the various agents causing an allergic state must be elicited and the relative part each plays in any one case must be interpreted. In studying each patient the possible causative allergens, inhalants, foods, drugs, contact, serum, physical agents, and infection must always be kept in mind. The role each plays must be interpreted and separation of the minor from the major allergens must be made.

A simple report of skin tests with treatment to the positive reactions thereby shown will necessarily result in failure in many cases where, had there been a careful interpretation of the patient as a whole, the problem would have been simplified. A 4 plus skin reaction does not necessarily mean that there is an allergic state present; a negative skin reaction does not necessarily mean that allergy does not exist.

Summary

1.—It is essential to treat the allergic subject as a whole and control all factors including physical factors as early as possible in the management for the most favorable effect.

2.—Absolute cooperation between patient and doctor is necessary and the physician must watch for a break in the routine by the patient, such as eating a known offending agent.

3.—Allergic patients are miserable and get worse as time goes by. They deserve careful study. This is not difficult if a definite plan of action is followed.

Recapitulation

An emphasis is placed on the need for a meticulous diagnosis of routine cases of respiratory allergy. The first phase of the allergic diagnosis is the differentiation of the non-allergic from the allergic states. The next phase is to find the allergenic agents causing the state of hypersensitivity and to determine the relative importance as causative factors of each of these agents. Important questions in the allergic history are discussed and the need for a careful physical examination and laboratory study is brought out. A plea is made for a careful evaluation of the patient and findings as a whole. There is no attempt to outline a complete diagnostic study of any given case, but the factors which the author believes to be most important in the routine diagnosis of most cases are presented.

References

1. Steele, J. M.: Evaluation of Skin Testing in Allergy, *Annals of Allergy* **12**:17, 1944.
2. Swineford, O., Jr., and Weaver, W. M.: History Taking in Allergy—An Outline for and a Comparison of Results of 200 Histories and Skin Tests, *Annals of Internal Medicine* **20** (OS, 25): 293, 1944.
3. Tuft, L.: Critical Evaluation of Skin Tests in Allergy Diagnosis, *Annals of Allergy* **14**:355, 1944.
4. Urbach, E.: Allergy, Grune and Stratton, 1943.
5. Vander Veer, A., Cooke, R. A., and Spain, W. C.: Diagnosis and Treatment of Seasonal Hay Fever, *Am. J. M. Sc.* **174**:101, 1927.

Seventh and Anderson Streets.

SPINAL ANESTHESIA*

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Spinal anesthesia is perhaps the safest and best method of anesthesia in surgery below the diaphragm, especially that which requires considerable relaxation, provided the following requirements are fulfilled:

(1) The surgeon or anesthesiologist giving the anesthetic must be well informed regarding the fundamentals and principles of spinal anesthesia, e.g., thoroughly familiar with the technique and with the action of the anesthetic solution being used.

(2) The patient must be a good surgical risk.

(3) Deep breathing and leg exercises, as well as frequent change of position should be instituted as soon as the patient returns from the operating room.

Spinal anesthesia is not necessarily the best method of anesthesia for poor risk cases; neither is it suited for the aged nor the very young. Before the surgeon decides to use spinal anesthesia in poor risk cases, he should take into consideration all factors involved and consult with someone well informed about anesthesia in general so that the possibility of another more suitable method of anesthesia would not be overlooked. Consultation with an internist would also be advisable in these questionable cases. However, it is true that an anesthesiologist, well informed about spinal anesthesia, can, in certain poor risk cases, use it to advantage over other types of anesthesia. This discussion of spinal anesthesia will be limited to two anesthetics: (1) Procaine, and (2) Pontocaine-Glucose. The techniques employed are (a) single dose spinal, and (b) continuous, intermittent, or multiple dose spinal.

There are many fundamentals and principles involved in inducing and safely carrying out spinal anesthesia, but the *most important fundamental is the relationship of the specific gravity of the anesthetic solution to the specific gravity of the spinal fluid.* If this one fundamental is not known, or is ignored, there can be no safety in spinal anesthesia. One should never use a spinal anesthetic unless it is known that the specific gravity of the anesthetic solution is definitely lighter (hypobarbic) or heavier (hyperbarbic) than the known variations of the specific gravity of the cerebrospinal fluid. Average sp. gr. of spinal fluid is 1.007, with variations ranging from sp. gr. 1.001 to sp. gr. 1.010. It is seldom that the sp. gr. is as light as 1.003.

Height of Anesthesia:

The height of the anesthesia cannot safely be regulated by forceful and rapid injection. Whenever anyone attempts to control the height of spinal anesthesia by forceful injection, he is using an undetermined factor and one which may prove extremely dangerous. *The height of anesthesia should be regulated by the following six factors:*

(1) The specific gravity of the anesthetic solution.

(2) Position of the patient during and after the injection (tilting of the table; raising or lowering the head of the table, as indicated).

(3) Dosage.

(4) Volume.

(5) Rate of injection.

(6) Site of the injection (least important).

Contraindications to the Use of Spinal Anesthesia:

(a) Advanced surgical shock or hemorrhage.

(b) Marked debility.

(c) Cardiac disease, moderate or advanced.

(d) Extremes of blood pressure, particularly hypotension.

(e) Limited vital capacity, particularly if expecting to use Trendelenburg position.

(f) Diseases of central nervous system.

(g) Highly nervous individuals and those afraid of spinal anesthesia.

(h) Sepsis.

(i) Infection of skin at site of injection.

(j) Minor surgical procedures.

(k) Poor risk cases, unless, after consultation, it is decided that the spinal anesthesia would be safer after all factors are considered.

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†The opinions expressed in this article are those of the writer and are not to be construed as reflecting the views of the Navy Department.

Indications for Spinal Anesthesia:

Spinal anesthesia is indicated only in surgery below the diaphragm, such as:

(a) Surgical cases requiring considerable relaxation.

(b) Surgery below the diaphragm in the presence of the following: Pulmonary diseases, such as asthma, bronchitis, bronchiectasis, emphysema, and tuberculosis where inhalation anesthesia might be inadvisable; hepatic diseases; metabolic diseases, such as diabetes; and nephritis.

(c) Acute abdominal surgery, except in shock or hemorrhage (for example, ectopic pregnancy).

(d) Particularly indicated in operations on the stomach, intestines, gall-bladder and extra-hepatic bile ducts, mechanical intestinal obstructions, appendicitis, hernias, transurethral surgery, rectal surgery, major dislocations and major amputations of the lower extremities.

Complications During Anesthesia:

(a) *Respiratory Paralysis.—Respiratory paralysis is always due to too high anesthesia.* The anesthesia should not extend above the nipples in surgery of the upper abdomen and if proper care is taken, the height of the anesthesia can ordinarily be well controlled. Certainly complete respiratory paralysis should not occur if a careful technique is employed. The depth of the respirations should be frequently observed. In the event respirations are significantly diminished, oxygen in high concentrations should be administered, and if necessary artificial respirations instituted. Compression of the rebreathing bag will aid in increasing the depth of the respirations.

(b) *Fall of Blood Pressure.—Circulatory depression* may occur any time during the anesthesia, but, as a rule, it is manifested rather early. While there will be some cases developing marked hypotension, even when anesthesia is not high, *as a rule, marked hypotension is due to too high anesthesia. Circulatory depression is a most serious complication and is thus to be avoided.* As a prophylaxis against the development of hypotension, give ephedrine mgm. 50 about 5 to 10 minutes before the spinal is given. It is advisable to have neosynephrine m v to m vii ready so that it can be given upon the first sign of hypotension. Methedrine in doses of 20-30 mgm. is also useful in preventing hypotension and its action is prolonged. The blood pressure should be taken before the anesthetic is given and every five minutes during the operation. It is much easier to prevent hypotension than to treat it after its development, in view of which the anesthesiologist must be constantly alert to its development. However, if it does occur, then prompt action should be taken to combat it and oxygen given in high concentration. One should remember that ephedrine may occasionally cause cardiac irregularity and that the pulse may be slowed by neosynephrine.

(c) *Nausea and Vomiting.*—Nausea and vomiting may occasionally be due to the anesthetic agent but they are usually due to too high anesthesia or to hypotension. They also occur during operative procedures, particularly those of the upper abdomen. Oxygen in high concentration is helpful.

(d) *Bloody Spinal Fluid.*—Do not give a spinal anesthetic in a bloody spinal fluid. If unable to get a clear fluid after trying other sites, then use a different type of anesthesia.

(e) *Sensitivity.*—While sensitivity to the anesthetic agent has been reported, it certainly is of rare occurrence. It is probable that a large percentage of what has been reported as sensitivity was actually due to errors in technique.

(f) *Inadequate Anesthesia.*—Inadequate anesthesia may be due to an insufficient amount of the anesthetic agent or to an inadequate anesthesia for unusually long operations. It may also be due to an inadequate concentration of the anesthetic. The anesthetic solution must promptly reach all the nerve roots it is desired to block. *Diffusion* is greater with low spinal fluid pressure and therefore more profound anesthesia will result. The nerve roots near the site of the injection show the most intense and profound block, while those roots higher up and reached by weaker solutions have a shorter anesthesia of less depth.

(g) *Failures.*—If you have a failure of anesthesia, it is because the injection was not made into the subarachnoid space. Failures happen even though one may have obtained a free flow of spinal fluid, due to not holding the needle still while the injection was being made. A frequent cause of movement of the needle is made during the attachment of a syringe with a Luerlock. Other causes of failures are the use of long bevel needles, and to deteriorated solutions. Short bevel needles are safer and more efficient than the long bevel ones. The

anesthetic solution should always be checked for signs of deterioration before the injection.

Complications—Post-Operative:

Post-operative complications actually resulting from the anesthetic are rare.

(a) *Headaches.*—Headaches occur in a certain percentage of cases. Most of these might be termed psychological headaches, since the patients are usually warned that by raising their heads, a headache will result. If the patients are assured that they will do well, headaches seldom occur.

(b) *Nausea and Vomiting.*—These are rarely due to the anesthetic, but more often are due to the operation.

(c) *Meningismus.*—This is of extremely rare occurrence if a proper technique is carried out, but may occur in neurotic individuals or when a deteriorated solution is used.

(d) *Urinary Retention.*—We have found only a slightly higher incidence of urinary retention after spinal anesthesia than after general anesthesia for the same type of surgery, but some reliable authors have reported a much higher incidence.

(e) *Respiratory Complications.*—Respiratory complications are about the same after spinal anesthesia as after general anesthesia (possibly excepting ether), if deep breathing exercises and frequent change of position are not carried out. However, if deep breathing exercises and frequent change of position are promptly instituted after the patient returns from the operating room, then pulmonary complications are less after spinal anesthesia.

(f) *Injury to the Cord and Nerves.*—The cord terminates about the upper part of the second lumbar vertebra (except in children where it is usually lower) and there is a real danger of injury to the cord if the puncture is made high. If the injection is gently made and in the proper interspace, injury to the cord and nerves should be of extremely rare occurrence.

Pre-Operative Medication:

Patients to be given spinal anesthetics are entitled to sufficient pre-operative medication to dull their sensibilities, so they will not become frightened or panicky during the operation. Drowsiness is to be desired, but complete hypnosis is not advisable.

A satisfactory plan of pre-operative medication is as follows: Phenobarbital grs. iss at bedtime; seconal (or other suitable hypnotic) grs. iss two hours before, with morphia gr. 1/6-¼ and atropin sulph. gr. 1/150 one hour before the scheduled operation. These doses should be varied to meet the individual requirements.

Techniques:

Detailed techniques will not be discussed, as each surgeon should develop the details most suitable to himself after he has studied spinal anesthesia and observed anesthesiologists well trained in spinal anesthesia. There are, however, a few details which it might be well to emphasize.

Spinal anesthesia as discussed in this article will apply to the use of spinal anesthesia as used in a general hospital with nurse-anesthetists, and where the surgeons give the anesthetics and accept full responsibility for the anesthesias. Therefore, there will be a somewhat limited use of spinal anesthesia, as well as a restriction of the number of anesthetic agents employed.

(a) *Anesthetic Agents.*—By limiting the anesthetic agent to procaine and to pontocaine-glucose, the anesthetic agents are hyperbarbic (heavier than the spinal fluid) and therefore the technique in regard to the specific gravity will follow the same principles, although more care will have to be exercised with the pontocaine-glucose solution as it is much heavier. *By gravity these hyperbarbic solutions, particularly pontocaine-glucose, can be caused to flow to most any desired position within the spinal canal.* Therefore, if the head of the table is low for any particular length of time when using these hyperbarbic solutions, the anesthesia will extend too high.

It is customary to dissolve the procaine crystals in spinal fluid and to mix pontocaine solution 1 per cent with an equal part of glucose 10 per cent. If pontocaine crystals are used, they are dissolved in saline, mgm. 10 to each c.c., and the resulting solution mixed with an equal part of glucose 10 per cent. These two anesthetic agents satisfactorily meet the requirements in the majority of cases when spinal anesthesia is indicated.

(b) *Dosage.*—While procaine is often used in much larger doses, it probably is advisable to limit its dosage to 150 mgm. when the single dose method of spinal anesthesia is employed. *Pontocaine solution as at present manufactured with a specific gravity of about 1.007 should not be used alone for spinal anesthesia because it is not necessarily either*

hypobarbic or hyperbarbic, and therefore would be too dangerous. Pontocaine should always be used with glucose. The glucose has no anesthetic properties and it is used to make certain that the solution will always be heavier than the spinal fluid. The dosage of pontocaine in the single dose technique should never exceed 20 mgm. and it seldom should exceed 16 mgm. *Whenever the operating time is to be prolonged, continuous spinal would be indicated instead of the single dose method.* The more the cerebrospinal fluid is displaced by volume of the anesthetic solution, the more extensive will be the area of anesthesia. The greater the dosage, the more profound will be the anesthesia, and the area of anesthesia will also be greater.

(c) *Specific gravity of the anesthetic solution and the position of the patient on the table as determined by tilting the table and by raising the head.*—When using these hyperbarbic anesthetic solutions, the head of the patient and cervical spines should be kept elevated while the anesthetic solution is being given, and when the patient is placed upon his back, the head, cervical and upper dorsal spines must be elevated until the anesthetic has become fixed in order that the anesthesia would not extend too high. In fact, it is advisable to keep the head of the patient elevated throughout the operation, particularly when using pontocaine-glucose. *Too high anesthesia with its resultant hypotension and respiratory paralysis should be prevented, with careful attention to details in regard to the specific gravity of the anesthetic solution.* Just as soon as the patient is placed upon his back, there must be constant testing of the skin until the desired height of anesthesia is reached. An Allis clamp is excellent for testing the skin anesthesia.

CONCLUSIONS

1. Spinal anesthesia is only indicated in surgery below the diaphragm.

2. Spinal anesthesia is perhaps the safest and best method of anesthesia in surgery below the diaphragm, especially that which requires considerable relaxation, provided the following requirements are fulfilled:

(a) The surgeon or anesthesiologist giving the anesthetic must be well informed regarding the fundamentals and principles of spinal anesthesia, e.g., thoroughly familiar with the technique and with the action of the anesthetic solution being used.

(b) The patient must be a good surgical risk.

(c) Deep breathing and leg exercises, as well as frequent change of position should be instituted as soon as the patient returns from the operating room.

3. Spinal anesthesia is not necessarily the best method of anesthesia for poor risk cases. The surgeon should consult with an anesthetist and with an internist before deciding to use spinal anesthesia in poor risk cases.

4. When the surgeon has to give the spinal anesthetic and has to accept responsibility for it, then the number of the patients given spinal anesthetics will be less and the number of anesthetic agents will be more restricted than would be the case when a trained physician is the anesthesiologist.

5. *Too high anesthesia,* with its resultant respiratory paralysis and hypotension, is a most serious complication but should be avoided by careful attention to details.

6. *Spinal anesthesia should not be used for minor surgical procedures.*

7. Respiratory complications are less after spinal anesthesia, provided deep breathing exercises and frequent change of position are promptly instituted as soon as the patient returns from the operating room.

8. Only anesthetic solutions which are definitely hypobarbic or hyperbarbic should be used for inducing spinal anesthesia.

9. *Whenever the operating time is to be prolonged, continuous spinal would be indicated instead of the single dose method.*

10. There are few hospitals of 200 or more beds where they can not afford to employ a physician trained in anesthesia, and surgeons in authority in these larger hospitals should make a plea that a physician-anesthesiologist be placed in charge of the Department of Anesthesia.

BIBLIOGRAPHY

Babcock, W. Wayne: Spinal Anesthesia, Cyclopedia of Medicine, Surgery and Specialties, F. A. Davis Co., pp. 574-604.

Dodd, Harold, and Prescott, Frederick: The Use of Methedrine in Operations—Clinical Study of an Effective Pressor Drug. *S. G. and O.* **77**:645-659, December, 1943.

Eversole, Urban H.: Some Anesthetic Problems—Surgical Practice of the Lahey Clinic, W. B. Saunders Co., pp. 789-792.

Graham, Roscoe R., and Brown, Easson W.: Spinal Anesthesia in Abdominal Surgery. *Annals of Surgery* **110**:5, 863-871, November, 1939.

Martin, R. C., Livingstone, H., and Wellman, V.: Continuous Spinal Anesthesia. *Archives of Surgery* **50**: 130-136, March, 1945.

Nicholson, Morris J.: Pontocaine-Glucose Solution for Spinal Anesthesia. Surgical Practice of the Lahey Clinic, W. B. Saunders Co., pp. 824-830.

Pitkin, George P.: Spinal Anesthesia. Practice of Surgery, Dean Lewis **1**: Chapter 5, pp. 1-24.

Saklad, Meyer: Spinal Anesthesia. *American Journal of Surgery,* New Series, **3**:519-530.

Silvers, Homer I., and Leonard, Isaac, Jr.: The Use of Neosynephrin Hydrochloride in Maintaining Blood Pressure During Spinal Anesthesia. New Series, **1**:79-83.

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Doctor Estimates Three Out of Four People Have Athlete's Foot.

Dr. Jerome S. Peterson believes that three out of four persons have, or once had, athlete's foot, which is caused by tiny organisms called fungi.

The New York physician, writing in the current issue of *Hygeia,* the health magazine of the American Medical Association, says that these fungi follow the example of most germs and bacteria by liking heat and moisture. With the approach of summer, trouble begins for sufferers of athlete's foot. Dr. Peterson states:

"In a cold, dry place, the fungi wither away after a while, but when they are on feet which become overheated, and start perspiring, they flourish.

"The fungi usually are found in great hordes in public showers, gymnasiums and around the edges of swimming pools. Almost everyone has the fungi on his feet—yes, even people who have never had any symptom of athlete's foot.

"There are some cases where the infection isn't confined solely to the feet. The hands are the likely sites for this secondary infection, but occasionally the thighs and other parts of the body may be included.

"Athlete's foot fungi may be tiny, but they're remarkably resistant fellows, who have kept scientists guessing for about 25 years. No substance has been discovered which is guaranteed to cure every case of athlete's foot. The main drawback in this search is that it's not easy to discover a potion which will destroy the fungi without destroying the healthy foot tissue."

Nicotinic Acid Relieves Patients With Severe Headaches.

Two New York physicians, writing in the May 11 issue of *The Journal of the American Medical Association,* report that nicotinic acid is highly effective for the relief of headaches of a persistent nature, such as migraine or severe idiopathic headaches which stem from an unknown cause.

Joseph W. Goldzieher, M.D., and George L. Popkin, M.D., from the New York City Hospital, Welfare Island, say that of 100 consecutive patients with severe headaches who received injections of nicotinic acid, 75 were completely relieved.

The patients had 100 milligrams of nicotinic acid in a salt solution injected into their veins. This was the standard dosage. In the average case from 30 to 45 seconds elapsed before the patient was aware of any effects, the doctors write. Then there was a feeling of warmth or heat with an accompanying flush. "Within three or four minutes the patient, though not comfortable, became accustomed to the heat, which gradually subsided in about 15 minutes and usually disappeared in 20 minutes to a half hour."

Nicotinic acid is a nutritional factor of the vitamin B complex, used in the treatment of acute pellagra—a vitamin deficiency disease. It is known to produce a dilatation of the blood vessels with an increase of blood flow to the brain.

Nicotinic acid has also been known to relieve malarial headache and sinus headache.

MANAGEMENT OF ADENOMATOUS GOITERS*

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I propose to limit my discussion this afternoon to adenomatous goiters, toxic and non-toxic, as this is the predominant type that occurs in this section of the State. One thing we must remember is that adenomas of the thyroid gland are true neoplastic growths. There is no more reason for the questioning of the neoplastic nature of adenomatous nodules in the thyroid gland than there is to question the neoplastic nature of adenomatous nodules in the prostate gland, intestinal mucosa, uterus, kidney and mammary gland. The layman and the medical profession are very apprehensive about a small growth in the breast tissue but this does not hold true with the same type of growth in the thyroid gland.

Adenomatous goiters are primarily a surgical problem. Medical treatment is of no avail and irradiation or thiouracil are indicated only in inoperable malignancy or after removal of the malignant tumor.

Adenomatous goiters are dangerous for the following reasons:

1. About 60 to 70 per cent of them become toxic. This toxicity develops insidiously and is less likely to undergo spontaneous remission than any other type of goiter.

2. About 2 to 3 per cent of adenomatous goiters prove to be malignant.

3. Many of the goiters that do not become toxic or malignant gradually increase in size and extend into the thorax, producing dangerous pressure symptoms on the trachea, esophagus and blood vessel.

4. Adenomatous goiters may cause cardiac damage without producing typical symptoms of hyperthyroidism.

5. A thyroid crisis may be precipitated by other disturbances, such as an infection, miscarriage, surgery, and further complicate the picture. When a crisis occurs in a delicate type of individual, a profound state of prostration may exist rather than a hyperactivity and an excitable stage. If a patient has two existing surgical conditions, the goiter should receive precedence except in an extreme emergency.

If we consider all growths in the thyroid glands primary neoplastic growths, just as we find in any other organ in the body such as the breast, the surgical removal of all adenomatous goiters appears justified. Occasionally we may allow a small thyroid nodule to remain under observation. This is satisfactory in the majority of cases, but when patients are 40 years of age or more it is less satisfactory since the presence of earlier malignant changes cannot be excluded in any nodular goiter. If all non-toxic or toxic adenomatous goiters were removed surgically, the incidence of malignancy would be almost entirely eliminated. In addition, adenomas of the thyroid gland are subject to many types of complications, such as degenerative changes, strangulation, hemorrhages, infarction, necrosis and formation of cystic areas and atrophy-calcification. They are also subject to all kinds of inflammatory changes.

Adenomatous goiters may be divided into several classifications from the pathological standpoint, but this makes very little difference to the clinician since the findings in a nodular goiter are well known. You may find a discrete rounded tumor in either lobe or isthmus, or you may find multiple nodules throughout the entire gland, producing great distortion. Adenomatous goiters are usually found in older patients than those with hyperplasia of the gland.

There is a tendency to advise patients who have a growth in the thyroid to let it alone until it begins to give them trouble. This advice means a great responsibility on the doctor because there is still no single reliable sign, symptom, or test to aid in the diagnosis of toxicity of the thyroid gland. A reliable objective test has been sought without avail for many years. Far too much reliance is still placed upon the findings of an increased basal metabolic rate. The accuracy of this determination depends largely upon the tranquility and the cooperation of the patient, those factors which are too often overlooked in the evaluation of the results. However, under proper conditions it is the most reliable single diagnostic aid. Persistent tachycardia, an enlarged thyroid gland (which is sometimes difficult to pal-

*Read before the Southwestern Virginia Medical Society at Radford, Va., October 4, 1945.

pate), weight loss, nervousness, emotional instability, fatigue, intolerance to heat and muscular weakness are indications of toxicity. Increased appetite with loss of weight is the usual picture but in a few cases they may have increase in weight due to the excessive intake of food. In a patient who has a persistent high pulse pressure, the diagnosis of hyperthyroidism should be considered. The progress of the disease in the adenomatous goiter is very insidious and the toxic changes may be present several years before this condition is recognized. Iodine medication is very dangerous in non-toxic adenomatous goiters, because severe toxic changes may be induced. Patients should never receive iodine unless they are being prepared for surgery.

Mention should be made of the menopausal symptoms which are often accompanied by toxic change in adenomatous goiters. I do not mean amenorrhea alone which is a common symptom, but hot flashes with amenorrhea occurring in women of the menopausal age. The nervous symptoms of menopause are so closely similar to those of hyperthyroidism that the case may be confused. It has been my experience that non-toxic goiters become toxic more often between the ages of 40 and 50. It is often difficult to determine whether the menopause is causing the disturbance or if it is caused from the toxicity of the adenoma of the thyroid gland. I believe, in cases of this type, the diagnostic course of Lugol's solution is extremely helpful. They should not be given any other type of medication during this trial period. Shute reported recently several cases of hyperthyroidism treated by estrogenic hormone and there are many such examples in the literature. It may be that the normal estrogenic blood level keeps a potentially toxic thyroid under control, but at menopause when the estrogenic blood level drops the symptoms of hyperthyroidism become more apparent. I certainly feel that any patient in the menopausal age, who is being prepared for surgery, should receive estrogenic hormone along with Lugol's solution.

I believe that all adenomatous goiters, toxic or non-toxic, should be removed surgically. It is necessary, in my opinion, to prepare all patients for surgery regardless of toxicity. The majority of the thyroid surgeons feel that it is unnecessary to prepare a non-toxic adenoma for surgery, but since this is so difficult to determine I believe it is safer to give all patients a preparatory treatment. I see no reason why taking iodine for a short period of 10 days would be of any disadvantage to the patient, but I do believe that a prolonged use of iodine in a non-toxic thyroid may be dangerous. The patients are usually given 10 drops of Lugol's solution in grape juice three times a day after meals, for 10 days. They are also given B complex during this time and phenobarbital, as necessary, for sedation. After treatment for 10 days or two weeks, they are admitted to the hospital and basal metabolic rate, routine laboratory and hippuric acid liver function tests are done. The patient should be prepared mentally as well as physically. If the patient is too apprehensive about the operation, try to make it a point to have him visit a patient who has recently been operated on and is making a good recovery. Psychological preparation is probably just as important as medical preparation. I usually explain to the patient how I expect to do the operation, under what type of anesthesia, and do not attempt to "steal" the goiter. The night before the operation the patient is given a thousand milligrams of vitamin C and 3 grains of nembutal. One hour before the operation the patient is given morphine, grains 1/4, or morphine, grains 1/6, with atropine, grains 1/150, and nembutal, grains 3. When they undergo an operation with this type of medication, they are usually quiet and not apprehensive. The type of anesthesia used in all the cases reported in this series is local anesthesia supplemented by pentothal sodium intravenously. Bilateral cervical plexus block is also included in the local anesthesia. After the patients leave the operating room they are usually awake, but quiet and not apprehensive or excited. An attempt is made to have them start drinking water freely, immediately after leaving the operating room or as early as possible thereafter. The next day after the operation, the patient is allowed to have a soft diet and bath room privileges, if desired.

I would like to report 98 consecutive thyroidectomies done from 1941 to 1945 with no deaths. The pathological report was given by Dr. J. Hamilton Scherer of Richmond, Virginia. As you will note from the table, in this series there were 57 cases of toxic and non-toxic adenomata. We have two cases in this series reported as papillary cyst adenomas but a suggestion was made that an early malignancy might be present. Another interesting factor is that only three cases were male. The percentage of

Hashimoto's disease is rather large. All of the patients received Lugol's solution in their preparation of surgery. Thiouracil was used in three cases during preparation with good results. One case had a rather severe toxic reaction from thiouracil and this was discontinued. Thiouracil may be very beneficial in preparing an extremely toxic adenomatous goiter for surgery, along with Lugol's solution. Thiouracil has no place in the treatment of the adenomatous type of goiter.

98 CONSECUTIVE THYROIDECTOMIES FROM 1941-1945
PATHOLOGICAL REPORT BY DR. J. HAMILTON SCHERER,
RICHMOND, VIRGINIA

		Male	Female	Deaths
Non-toxic adenoma	27	1	26	0
Toxic adenoma	32	1	31	0
Colloid goiter	16	1	15	0
Exophthalmic goiter	3	0	3	0
Papillary-cyst adenoma	2	0	2	0
Fetal adenoma	2	0	2	0
Toxic hyperplasia	12	0	12	0
Hashimoto's disease	4	0	4	0
(struma lymphomatosa)	—	—	—	—
	98	3	95	0

Myxedema may occur as a complication following thyroidectomy. In a nodular type of goiter you will occasionally have to remove the entire gland in order to get all of the adenomatous tissue, because if all of the adenomatous tissue is not removed you will certainly have a recurrence of the growth. There were three such cases in the series of 98 cases reported above. Myxedema can be handled very satisfactorily with thyroid extract. Post-operative myxedema may disappear spontaneously or it may require indefinite treatment, and a patient needs to be cautioned to take thyroid extract indefinitely. After patients become familiar with the symptoms of myxedema, such as swelling of the upper eyelids, stiffness of the hands and general weakness, they can handle the case themselves. All cases of thyroidectomy should be under observation for several months or probably a year, following the operation. The operation alone is only an incident in the treatment of this type of disease.

SUMMARY

1. Ninety-eight consecutive thyroidectomies are reported with no deaths.
2. Discussion was limited to toxic and non-toxic adenomatous goiters. All toxic and non-toxic goiters are surgical unless some very serious complication accompanies the conditions.
3. All patients are prepared for surgery, both toxic and non-toxic, because it is difficult at times to be certain that you are not dealing with a low-grade toxic thyroid.
4. Estrogenic hormone is used in preparing patients for surgery when in the menopausal age.
5. Local anesthesia, supplemented with 2½ per cent pentothal sodium intravenously, makes a very desirable type of anesthesia.
6. Average age of patient: 40. Average age of toxic adenoma: 43.
7. Complications: Tetany, 3 cases. Recovered after two or three months. Recurrent laryngeal nerve injury, 1 case. Hoarseness after six months. Myxedema (mild), 10 cases.

BIBLIOGRAPHY

1. Rose, Edward: The Diagnosis and Treatment of Thyroid Disease. *Medical Clinics of North America* **26**:1711, November, 1942.
2. Hurxthal, Lewis M. and Parker, Seymour: The Diagnosis of Borderline Hyperthyroidism. *Surgical Clinics of North America* **26**:767, 1943.
3. Shute, Wilfred E. and Shute, Evans V.: *The Canadian Med. Assn. Jour.* **46**:441-444, 1942.
4. Davis, Arthur C. and Howell, L. P.: Medical Management of Diseases of the Thyroid Gland. *Medical Clinics of North America* **24**:991, July, 1940.
5. Peiffer Damon B. and Martin, Albert G.: Diagnosis and Surgical Treatment of Goiter. *Medical Clinics of North America* **41**:455, 1942.
6. Hendrick, James W.: Use and Abuse of Iodine in the Treatment of Goiter. *Amer. Jour. Surg.* **41**:455, 1942.
7. Chesky, V. E.: The Degenerating Thyroid and Its Effect on the Heart. *Tr. Am. A. Study Goiter,* pp. 1-5, 1939.
8. Lee, J. Gordon: Chronic Nonspecific Thyroiditis. *Arch. Surg.* **31**:982, 1935.
9. Pemberton, J. deJ.: Malignant Lesions of the Thyroid. *Surgical Clinics of North America.* August, 1941. Mayo Clinic Number.
10. Watson, William L. and Pool, John L.: Cancer of the Thyroid. *Surg., Gynec. and Obst.* **70**:1037, 1940.
11. Graham, James M.: Malignant Disease of the Thyroid. *Edinburgh Med. Jour.* **44**. tr. 37-72, 1937.
12. Goodman, B. A.: Surgical Indications in Thyroid Disorders. *Amer. Jour. Surg.* **42**:387-395, 1938.
13. Briedenbach, Lester and Appelbaum, Emanuel: Masked Hyperthyroidism. *Annals of Surg.* **115**: 184, 1942.

14. Hartsock, C. L.: Clinical Aspects of Hypothyrodism. *Cleveland Clinic Quart.* **1**:53-62, 1939.

15. Ewing, James: Neoplastic Diseases. 3rd Edition, Philadelphia, 1928. W. B. Saunders Company. Page 1961.

16. Lahey, Frank H.: The Diagnosis and Management of Thyroid Conditions. *West. J. Surg., Obst. and Gynec.* **43**:361-370, 1935.

17. Graham, Allen: The Thyroid Gland in Hyperthyroidism. *Surgical Clinics of North America.* October, 1941. Cleveland Clinic Number.

German Measles in Pregnancy Has Effect on Unborn Infant.

Women who suffer with German measles during pregnancy risk giving birth to a malformed child, according to an editorial appearing in the March 2 issue of *The Journal of the American Medical Association.*

German measles, known as rubella, is mild and less serious than measles. However, a study made in Australia between 1937 and 1942, when rubella was widely prevalent, shows the "occurrence of grave eye, ear, cardiac and other congenital defects in the children born during these years of mothers who had rubella during the early months of pregnancy."

One investigator cited in the editorial "estimated that practically all children of mothers who have rubella in the first two months of pregnancy and 50 per cent of those having it in the third month will be defective."

In conclusion the editorial says: "There can be no question that special efforts must be made to prevent rubella in early pregnancy. At this time all contacts with persons suffering from rubella must be avoided, especially by the woman who has not had the disease. Perhaps specific means of prevention will become available."

Find Early Sulfadiazine Treatment Effective for Dysentery.

Early sulfadiazine treatment of shiga dysentery produces a prompt cessation of symptoms, according to Major Lucian A. Smith, Medical Corps, Army of the United States.

"By formal definition bacillary dysentery, or shiga dysentery, is an acute infectious disease of the lower bowel caused by the Shigella group of organisms and manifested by fever, cramps, nausea, vomiting and frequent stools containing mucus, pus and blood," the author wrote in the January 5 issue of *The Journal of the American Medical Association.*

Major Smith based his conclusion on 87 cases of shiga dysentery seen in an army station hospital in New Guinea between May 1944 and March 1945. Fourteen in this group were treated with bed rest and a prepared diet; 20 were treated with sulfaguanidine, a compound of the sulfonamide group; 34 with sulfadiazine, and 19 with a combination of the two sulfonamides. The latter two groups had the most severe symptoms.

The author found that "if sulfadiazine treatment could be begun within 12 to 24 hours after onset of symptoms it was usually possible to anticipate objectively complete clearing of the lesions and restoration of a normal bowel within three to ten days."

Bacillary dysentery occurs all over the world although it is prevalent in the warm latitudes. It was the second most important war disease in World War I.

In dysentery the bacilli multiply in the intestines and produce lesions by direct contact of the organisms and their toxins with the intestinal walls. The deeper tissues and blood are seldom invaded and blood cultures are usually sterile. Therefore it has been necessary to use an instrument called the proctosigmoidoscope by which the observer can inspect the lower 10 to 12 inches of the bowel in the patient. The author wrote that "in 90 per cent of instances we feel it is possible to make an early positive diagnosis of shiga dysentery by means of the proctosigmoidoscope." It is extremely important that an early diagnosis is made before ulcerative lesions have a chance to form.

THE SKIN TEST AS A SUGGESTED AID IN THE DIAGNOSIS OF SALMONELLA SUIPESTIFER—A CASE REPORT

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and
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Various manifestations of *Salmonella suipestifer* infection have been described in the literature. The second case from world literature was reported from the Medical College of Virginia by Dr. Frederick W. Shaw in 1925. This case was diagnosed and studied only at postmortem. The organism was cultured from the blood while the patient was living, but it was not definitely identified until after death. The patient, a colored man, exhibited typhoid-like symptoms on admission and died twenty-four hours later.[1] In 1938, Clifton and Werner summed up the information on these infections and reported 36 cases in childhood.[2] The clinical manifestations vary and may be those of gastro-enteritis, respiratory tract infections, osteomyelitis, specific abscesses and septicemia.[3] This case had pulmonary symptoms with septicemia. It is reported because a skin test was used to show the tissue immunity reaction, and it is hoped that such a test might be developed for diagnostic purposes. In an extensive review of the literature we could find no reference to any type of skin test having been used for this organism.

CASE REPORT

A. H., a colored male aged two years, was admitted 1-17-44. He had "influenza" one month previously and since that time had had a continuous upper respiratory tract infection. On 1-14-44 this infection flared up into a fever, non-productive cough, rhinorrhea, and anorexia. There was no diarrhea, constipation, or convulsions. About twelve hours before admission his respirations became very rapid and he was quite restless.

Past history, including family history, was essentially negative except for a diarrhea of unknown etiology, at nine months of age. He had been fed breast milk for six weeks, a formula of evaporated milk until six months of age, and since then he has been on whole cow's milk from a city dairy. He has had cod liver oil and orange juice since six weeks of age. There was no history of exposure to any contagious disease.

Physical examination revealed a temperature of 106 degrees, pulse 120, and respiration 68. A pale colored child, fairly well developed and nourished, was lying quietly in bed in no acute distress. He appeared listless and was breathing rapidly, with a flaring of the alae nasi. There was a mucoid nasal discharge and crusting in both nasal passages. The pharynx was injected and the tonsils were prominent. Lymph nodes were not enlarged.

On auscultation the lungs showed questionable fine moist rales in both upper lobes. There was no apparent abnormality in percussion of the lungs.

The liver was felt two finger-breadths below the costal margin.

The reflexes were normal.

Chest x-ray at the time of admission showed a band-like density in the lower right periphery and there were numerous nodular densities at both hila. These were conglomerate with a suggestion of primary tuberculosis and compatible with bronchopneumonia.

Complete blood count on admission showed white blood cells 6,850, polymorphonuclear cells 57 per cent, eosinophiles 2 per cent, lymphocytes 41 per cent, monocytes 0, red blood cells 3,200,000, and hemoglobin 58 per cent. The urine was negative on all examinations. Tuberculin 1:500 was negative. Routine agglutinations including typhoid, paratyphoid, Brucella and tularemia were negative.

The temperature the first four days ranged from 104 to 106 degrees except for one drop to 100 degrees on the second day. It fell by lysis on the fourth and fifth day and was normal on the sixth hospital day. The next morning there was a rise to 106 degrees and sulfadiazine was instituted. It had not been used previously because of the leukopenia. The temperature fell to normal before two doses had been given. It was discontinued on the eighth hospital day.

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Dr. Morris is now in the Service and Dr. Irons is located at Greenville, North Carolina.

The pulse rate remained rapid until the second week when it gradually dropped to normal. Respirations followed the temperature curve.

Symptomatic therapy was instituted as follows: Hartmann's solution subcutaneously, 1 per cent ephedrine nose drops, 20 per cent Karo throat irrigations and two whole blood transfusions. At 10:30 P. M. on the night of admission patient became dyspneic and oxygen was administered for 24 hours.

Organisms found in the blood cultures done on 1-18-44 and 1-24-44 were identified by carbohydrate reactions and specific agglutination tests as Salmonella suipestifer. These were found in the stools on 2-11-44 although two subsequent cultures were negative. Urine cultures were negative on two occasions.

A skin test was done on the eleventh hospital day (the fourteenth day of the disease). The antigen used for this test was that of a saline suspension of the strain of Salmonella suipestifer previously isolated and identified from the blood taken on 1-18-44 from the patient.* It was standardized to the density of the bacterial suspension corresponding to the No. 3 tube of the McFarland Nephelometer, autoclaved at 15 pounds for fifteen minutes and preserved with .5 per cent phenol. Two dilutions were used, the first on the eleventh hospital day was 1:150, and the second on the fourteenth hospital day was 1:10,000. Both tests were read in twenty-four hours and showed a wheal 1 x ½ centimeters. As controls, two normal children were given identical tests each time. None of the normal children showed any reaction.

The child made a slow but steady recovery. X-rays taken on admission and every three or four days later showed some shifting of the densities with slow improvement and eleven days after admission the lung was nearly clear. The patient was seen in the clinic on 4-7-44 and was apparently in good physical condition.

He was readmitted to the hospital on September 5, 1945, and was diagnosed as scarlet fever. He made an uneventful recovery. A chest plate taken at that time showed the same few densities as seen on plate made nine months previously.

*Identified by Department of Bacteriology, Medical College of Virginia, and checked by Dr. Seligman, Beth Israel Hospital, New York.

DISCUSSION

It is conceivable that this disease is common where it is known that 10 per cent of all pigs have positive cultures from the gastrointestinal tract.[4] These animals contract the disease under adverse conditions, which presupposes that humans are also carriers. The source of infection in epidemics has been traced to unpasteurized milk, ham, pork, sausage, and crab meat.[3] However, sporadic cases are much more common than epidemic cases.[5] The source of infection in our case could not be determined definitely, but the history of poor environmental conditions is suggestive as a source. Gajzago and Göttche observed that the disease was more common in children and when entire families were affected that the youngest member of the family contracted the disease more easily.[5] He attributed this to the lower resistance of children.

The symptoms of the infection vary widely, depending on the area infected. Reported cases include the uncomplicated bacteremias, brain abscesses and other abscesses; multiple bony involvement with osteomyelitis, arthritis, and spondylitis; infections complicating surgical operations; endocarditis, cystitis, rare pyelitis, gastrointestinal tract involvement and pulmonary involvement.[6] Our case showed some pulmonary symptoms but since sputum cultures were not done we could not make a definite statement as to the extent of the pathology in the lungs.

This organism is becoming more widespread, being found in many more cases than are being reported and we feel that the clinician's attention will be called to the condition more frequently. A simplified skin test for diagnosis in localities where there is a lack of bacteriological facilities would be helpful.

The treatment of the case was symptomatic. It is very probable that sulfonamides had no effect.

SUMMARY

A case of suipestifer septicemia is presented with a new skin test. It is hoped that this skin test can be developed further for diagnostic use.

BIBLIOGRAPHY

1. Shaw, F. W.: An Infection of Man Probably Due to Salmonella Suipestifer. *J. Lab. and Clin. Med.* **12**:141 (November), 1926.
2. Clifton, Willie Mae, and Werner, Marie: Infections with Salmonella Suipestifer (Hog Cholera Bacillus) in Childhood with Report of a Case of Bilateral

Subdural Abscess Ending in Recovery. *Am. J. Dis. Child.* **55**:553, 1938.

3. Kuttner, Ann G.: Salmonella Suipestifer (Hog Cholera Bacillus) Infections. Brenneman, Practice of Pediatrics, Chap. 22, Vol. 3, 1944.
4. Bauer, John T., and McClintock, M.: Fatal Septicemia in Man Due to Bacillus (Salmonella) Suipestifer. *J. Infect. Dis.,* **44**:292, 1929.
5. Gajzago, D., and Göttche, Oskar (Budapest): Salmonella Suipestifer Infections in Childhood. *Am. J. Dis. Child.* **63**:15, 1942.
6. Harvey, A. M.: Salmonella Suipestifer Infection in Human Beings. *Arch. Int. Med.* **59**:118, 1937.
7. Gouley, B. A., and Israel: Salmonella Suipestifer Bacteremic Acute Endocarditis. *Arch. Int. Med.* **53**: 699, 1934.
8. Weaver and Sherwood, L.: Hematogenous Osteomyelitis and Pyarthrosis Due to Salmonella Suipestifer. *J.A.M.A.* **105**:1188 (October), 1935.
9. Schnitter: Aur Epidemologie u. Klinik der Bacillus Suipestifer Erkrankungen des Menschen. *Muchen. med. Wchnschr.* **74**:1011 (June), 1927.
10. Haynes, Edith and Meeks, L.: Salmonella Suipestifer Infection in a Child. *Am. J. Dis. Child.* **46**:1054, 1933.

Proposed Medical Research Center.

Major General Norman T. Kirk, Army Surgeon General, announced proposed plans for an Army Medical Research and Graduate Training Center at a press preview of Medical Department's exhibit booked July 1-5 for American Medical Association's 95th annual session in San Francisco.

The proposed Army center would be located at Forest Glen, Maryland. It is the site of National Park College which was converted to a convalescent hospital during the war to care for Walter Reed General Hospital patients. When the project is approved it will take approximately 12 years to construct.

With an eye toward post-war responsibilities of the Army Medical Department, such a center will consolidate Army research activities. Information gleaned in all Army laboratories now scattered throughout the United States and Panama would become available at the center. And, rare maladies encountered would be subjected to expert civilian and military scientific study as patients suffering such diseases would be transferred to a 1,000 bed general hospital which will be established in the center for clinical observation.

General Kirk has expressed a desire to have the general hospital and Army Institute of Pathology erected first with other buildings to follow. Other proposed installations are an Army Institute of Research Medicine and Dentistry, Army Institute of Research Surgery and Radiation Therapy, Army School of Global Medicine and an administration building.

Primarily devoted to basic research and graduate training, the Army is not in a position at this time to estimate how many laboratories would be discontinued in the field and placed in the proposed center. Further, many laboratories are strategically located with reference to study of certain endemic diseases, the permanent location of specialized troops such as Armored Forces and Chemical Warfare and with regard to accessibility to civilian medical equipment and laboratories.

It is certain that Army Institute of Pathology would be located at the center as soon as possible. World renowned, the pathology institute comprises Department of Pathology, American Registry of Pathology, Army Medical Illustration Service and Army Medical Museum. Founded during the Civil War, Army Institute of Pathology, formerly the Army Medical Museum, occupied its present quarters in 1887. Its 19th Century offices are now totally inadequate.

General Kirk explained that careful study had been given the present Army Medical Center grounds at Walter Reed General Hospital. Not more than two of the proposed units could be constructed in space immediately available.

Forest Glen, which is near District of Columbia and adjacent to Rock Creek Park, a national site, is large enough to accommodate the proposed center in the present and future. All research installations could be housed there and living quarters maintained for military scientists and caretaking personnel and civilian medical scientists who might be employed under United States Civil Service ratings. Further, garrison life would be possible with a parade ground and other military requisites available.

General Kirk emphasized that the proposed center was still in the planning stage and had not received War Department approval.

PRIMARY VIRUS MASTITIS FROM MUMPS*

CLAUDE MARSHALL LEE, M.D.,
Charlottesville, Virginia.

It is recognized that the report of a case of primary mastitis from the virus of mumps is open to justifiable skepticism both because there is no known method by which such a diagnosis may be proven, and because an exhaustive search of the literature, including all available in the Surgeon General's Library, has failed to disclose any previous report of such a case. However, the evidence, though necessarily "circumstantial", is so strong in the case under consideration that the diagnosis appears to be justified.

It will be recalled that in classical mumps, after an incubation period of from 14 to 21 days, the onset is characterized by painful swelling in one or both parotid glands, fever, ranging from 101 F. to 104 F., a *slow* pulse (50-60 min.), malaise, chilliness, anorexia and headache. There may be a prodromal period of 24 to 48 hours before the onset of frank parotitis and extreme elevation of temperature, which, once established, usually begins to subside after the second day, returning gradually to normal over a period of seven or eight days in uncomplicated cases. Relapses after 10 to 15 days are said to occur in about 10 per cent of cases, and the usual custom is to isolate for 3 weeks after onset of symptoms.

The common complications are meningo-encephalitis (20-23 per cent), and orchitis (1 per cent before puberty and 18-25 per cent after puberty), and the less common ones of deafness, pancreatitis, nephritis, oorphoritis, and *mastitis* are described as occurring occasionally. It is of course a matter of common knowledge that the submaxillary glands may, not infrequently, be involved, either independently or coincidentally with the parotids. The blood picture, though not diagnostic, may be helpful, with a moderate increase in white blood cells and a relative and absolute lymphocytosis.

CASE REPORT

The patient, Mrs. C. R. L., was a married woman of 38, the mother of 6 children, the youngest of whom was a nursing infant of two months. The patient had never had mumps, but within a period of 5 or 6 weeks prior to onset of her illness all of the children except the infant had mumps. The exact date of onset in the last child was not known, but was thought to be within two weeks of the onset of the mother's illness. The family lived in a small farm house near Free Union, Virginia, and daily contact was close, affording abundant exposure.

On June 8, 1945, the patient became ill with acute painful tender swelling of the right breast, followed in 24 hours by a similar swelling of the left breast, malaise and fever. For a day prior to the swelling of breasts there was difficulty in swallowing, but no pain in the jaws, no tenderness or swelling, even in the most minute degree in the parotid or submaxillary glands. Symptoms increased in severity for the first 2 days and then began to subside. The pain and swelling of the breasts had completely subsided 5 days later. However, on the fifth day she developed increased fever and a severe headache, with malaise, nausea and vomiting. Temperature was 103.2 F., pulse 80. There were no objective signs of meningeal irritation, such as stiffness of the neck or Kernig's sign. The patient was mentally clear; there was no petechial rash, and, except for headache, fever, ringing in ears, nausea and vomiting, no other signs of acute meningo-encephalitis. The abdomen was negative, with no tenderness over the ovaries and no muscle spasm.

The headache was relieved by pantopon, gr. ⅓, by hypodermic. It did not stop entirely, however, and persisted along with anorexia, nausea, weakness, vertigo and tinnitus for a period of 10 days, subsiding gradually. The patient used the bed rest position more or less constantly. No other treatment was administered except pantopon—by hypodermic and dissolved under the tongue. On June 25 her temperature was 97.8 and pulse 88. Breasts were now almost completely involuted, flabby and empty. Only a small amount of clear fluid could be expressed from each nipple. All deep reflexes present but sluggish. Pupils reacted nor-

*Read before the Albemarle County Medical Society January 3, 1946.

mally. Eye grounds normal. Ear drums negative, but there was complaint of some deafness.

After the tenth day of headache and associated symptoms, and 15 days after onset of the acute non-suppurative mastitis, the patient went on to a complete recovery. At no time during the entire illness did she have any involvement of either parotid or submaxillary glands.

DISCUSSION

The question arises at once as to whether or not this was a case of primary virus mastitis from mumps. Primary involvement of the testis in mumps[1] has been reported and mastitis as a complication of classical mumps is well recognized, but I have been unable to find a recorded case of primary involvement of the mammary glands.

In considering the question, the close histological and physiological relationship between the mammary glands and the salivary glands makes one wonder why such primary involvement might not occur nearly as frequently as it does in the submaxillary glands, since the virus obviously has an affinity for this type of glandular tissue. Little is known of the histopathology, since the disease is so rarely fatal, and available information is largely limited to studies of the salivary glands of monkeys in which the disease has been artificially produced.

In the present case, no other basis for the symptoms was demonstrated. The exposure had been adequate and the onset and course of the disease were similar in nearly every respect to a classical case of mumps complicated by mild meningoencephalitis. The only noteworthy disparity lay in the fact that none of the salivary glands was affected and both mammary glands were. Moreover, once the latter had become so involved, the pathological changes subsided in a manner identical to that in which the salivary glands return to normal in ordinary mumps. Although the parotid glands do not atrophy after mumps, it is known that when mastitis occurs as a complication, atrophy of the mammary parenchyma sometimes follows. It would be interesting to see, in the event that the patient becomes pregnant again, whether or not she is able to nurse the baby as she has her others.

If the diagnosis is accepted, the next speculation arises as to how the disease was transmitted. Most probably transmission was via the respiratory passages or mouth and stomach, as is believed to be the case in ordinary mumps. It is of interest, however, that the nursing infant did not contract the disease. It is well known that young infants, up to the sixth or eighth month, appear to have a high degree of immunity. It might, therefore, be reasoned that this infant though heavily exposed and carrying the virus in its mouth, without contracting the disease, may have transmitted it directly while nursing through the ostia of the mammary ducts.

Although confirmation of the diagnosis might happily have been derived from a sort of "complication in reverse" with later involvement of the salivary glands, this did not occur. The case is therefore reported on the basis of evidence at hand, since I know of no way in which the diagnosis might have been conclusively established.

1. Cecil, Text-Book of Medicine—6th Ed., P. 48—Muckenfuss.

205 East High Street.

"Courage and Devotion Beyond the Call of Duty."

Through the cooperation of Mead Johnson & Company, $34,000 in War Bonds are being offered to physician-artists (both in civilian and in military service) for art works best illustrating the above title.

This contest is open to members of the American Physicians Art Association and will be judged in June 1947 at the Atlantic City Session of the American Medical Association. For full details, write Dr. F. H. Redewill, Secretary, Flood Building, San Francisco, Cal., or Mead Johnson & Co., Evansville 21, Indiana.

SPONTANEOUS PASSAGE OF OPEN SAFETY PIN FROM ESOPHAGUS INTO STOMACH WITH POINT OF PIN DIRECTED DOWNWARD—REPORT OF CASE

PORTER P. VINSON, M.D.*
Richmond, Virginia.

Open safety pins are frequently swallowed by children and become impacted in the esophagus in many instances, requiring removal through an esophagoscope.

When an open safety pin of average size and moderate spread between the point and keeper is swallowed, the foreign body may lodge at any level in the esophagus, with the point and keeper pointed upward and the spring directed downward. A small pin may pass into the esophagus, with its point directed downward, or a large one may be swallowed, pass into the stomach and be regurgitated into the esophagus with its point directed downward. An open safety pin of any size that is lodged in the esophagus, with its point directed upward, may pass into the stomach spontaneously or may be purposefully pushed into the stomach during esophagoscopic examination.

Fig. 1.—Original roentgenogram showing foreign body in middle third of esophagus, with point of pin directed downward.

When the point of the pin is directed downward, esophagoscopic removal of the foreign body is accomplished with ease by grasping the spring and closing the pin as it is drawn into the lumen of the esophagoscope. There is no justification for attempting to push a pin in this position into the stomach during esophagoscopic examination. Spontaneous passage of an open safety pin from the esophagus into the stomach is seldom observed when the point of the pin is directed downward, and for that reason the following case is reported:

Fig. 2.—Roentgenogram immediately prior to proposed esophagoscopy, showing foreign body in intestine.

CASE REPORT.—A baby girl 7 months of age swallowed an open safety pin about 3:00 P. M., September 24, 1945. She had a vomiting spell soon

*Medical College of Virginia.

after the pin was ingested, and a roentgenogram made at 7:00 P. M. on the same day revealed the foreign body in the middle third of the esophagus, with the point of the pin directed downward (Fig. 1). The sequence of events and the position of the pin suggested that it had been swallowed and then regurgitated into the esophagus during the spell of vomiting.

When the child was seen the following morning preparation was made for esophagoscopic examination because it was believed that the foreign body would certainly remain in the esophagus until instrumental removal was accomplished. However, routine roentgenoscopic examination was made immediately prior to the proposed esophagoscopy, and the pin was shown to be in the intestine (Fig. 2). The foreign body passed spontaneously in the stool the following day (Fig. 3).

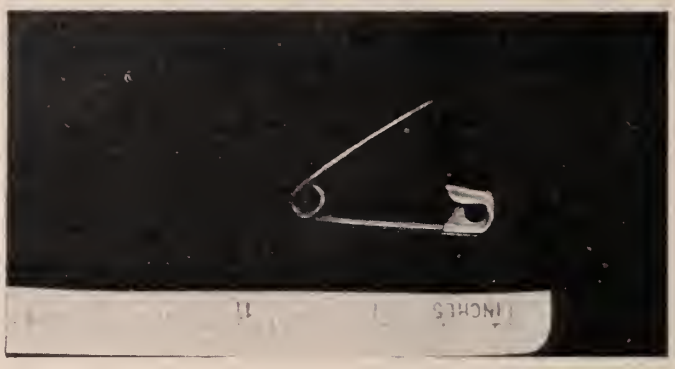


Fig. 3.—The foreign body after spontaneous passage.

Floral Eponym (40)

GILIBERTIA

JEAN EMMANUEL GILIBERT, 1741-1814

Gilibert was born at Lyon in 1741. Called to Poland by Stanislaus upon the recommendation of Haller, he created the botanical garden of Grodno and was professor of natural history at Wilna. He returned to Lyons in 1783 as physician to the Hôtel-Dieu, and was mayor of the city in 1792. His final post was professor of natural history at the *Ecole centrale du départment du Rhône.* He was the author of many books on botany and medicine. Osler has the following note in his *Bibliotheca Secunda*; "Gilibert was a famous botanist, ardent naturalist and anti-polypharmacist. The genus Gilibertia is called after him." Gilibert's son Stanislaus was also a physician. He graduated in medicine at Montpellier and was the author of a work on the lymphatic system in health and disease.

Gilibertia is a small genus of the family Araliaceae, consisting of tropical American shrubs. They are not known in cultivation. The name is frequently, but incorrectly, used by gardeners for Trevesia.

TENSION PNEUMOTHORAX FROM RUPTURE OF ESOPHAGUS REPORT OF CASE

W. E. PEMBLETON, M.D.,
Richmond, Virginia.

Tension pneumothorax following trauma is ordinarily caused either by interstitial emphysema with diffusion of air along the blood vessels into the mediastinum and pleural cavities or by rupture of the visceral pleura.[1] Leakage of air from the esophagus is a rare occurrence,[2] but should be considered when tension pneumothorax develops after trauma. Although I saw the patient only at postmortem examination, study of the following case presents a cause of tension pneumothorax which, so far as I have been able to ascertain, has not been reported previously in medical literature.

REPORT OF CASE

L. C., a white male aged 33 years, was brought to the hospital at 4:30 P. M., on January 8, 1945, approximately a half hour after the weapon carrier in which he was riding had overturned and had pinned him beneath it. On admission to the hospital the patient complained of abdominal pain and dyspnea, and he was in shock, with pallor, cyanosis, and perspiration.

The pulse was thready, with a rate of 120 per minute. The blood pressure was estimated at 80 systolic and 50 diastolic. Breath sounds were absent over the entire left side of the thorax. Other physical findings included tenderness over the ninth and tenth ribs in the left anterior axillary line and over the spinous process of the twelfth thoracic vertebra, an abrasion over the abdominal surface on the left side, and generalized abdominal tenderness and muscular spasm. The laboratory studies which were completed revealed an erythrocyte count of 4,250,000 and a leukocyte count of 18,600, with 64 segmented forms, 17 bands, and 19 lymphocytes. The hemoglobin was estimated at 70 per cent by the Tallqvist method.

Oxygen was administered continuously by nasal catheter; suction was instituted by the Wangensteen apparatus; and ½ grain morphine sulphate and ½ cc. tetanus toxoid were given. One thousand cc. each of plasma and 5 per cent glucose in normal saline were also administered, and the blood pressure rose to 108 systolic and 65 diastolic. However, the patient grew progressively worse; respiration became labored, with a rate of 44 per minute; cyanosis increased, and the pulse rate rose to 170 per minute. On physical examination, the heart was found to be displaced into the right side of the thorax. The patient was given an additional ¼ grain morphine sulfate and 1/150 grain atropine about four hours after admission. At 1:30 A. M. of the following day, nine hours after admission, he expired.

At autopsy, when the left pleural cavity was opened, air escaped with a hiss. Both lungs were collapsed, and there was early fibrinous exudate over their surfaces. The pleura was intact. The left pleural cavity contained approximately 500 cc. of slightly blood-tinged gastric contents, and the right pleural cavity contained approximately 200 cc. of thin blood-tinged fluid. A large tear in the esophagus, about ½ inch above the diaphragm, communicated with the left pleural cavity. The heart showed only scattered, faint, stippled hemorrhages. The abdominal cavity contained approximately 300 cc. of bloody fluid. Both ilio-psoas muscles were torn. There was retro-peritoneal hemorrhage, and the left diaphragm bulged inferiorly so that the stomach and the spleen were displaced to the right. There was a slight tear of the capsule of the liver. The transverse processes of the third and fourth lumbar vertebrae were fractured.

It would seem that in the unusual type of tension pneumothorax described above, recovery could have been achieved only by surgical closure of the rent in the esophagus.

201 West Franklin Street.

1. Hamman, Louis: Mediastinal Emphysema, *J.A.M.A.* **128**:1-6, (May 5) 1945.
2. *Ibid.*

PUBLIC RELATIONS AND MEDICAL CARE

The Council of the Medical Society of Virginia, meeting in Richmond, Wednesday, May 29th, in order to clarify and bring to the attention of the physicians of the State the need for a thorough understanding of the many problems facing the public and the medical profession in the field of medical service, adopted unanimously the following public relations policies and a Five Point Program:

Public Relations Policies of the Medical Society of Virginia

1. Maintain an office of public relations to serve the public and the medical profession.
2. Support a program of public relations embracing the following activities:
   - A. Meetings with component societies
   - B. Conferences with individual doctors
   - C. Forums—on timely subjects
   - D. Work with cohesive groups
   - E. Bulletins—of special importance
   - F. Press releases
   - G. Radio programs
   - H. Other items to the best interests of the medical profession in Virginia, and extension of medical service
3. Adopt Medical Society's Five Point Program.
4. Affect a united effort to extend medical service and hospitalization.
5. Advise public of medical service problems and the efforts of the medical profession to solve these problems.

Five Point Program

I. Inform the public.
   - A. What the medical profession
     1. Has done
     2. Is doing
     3. Hopes to do.
   - B. As to some of the problems of the medical profession in rendering medical care.
   - C. As to what the public can do to aid in a better medical service program.

II. A study and survey of matters pertaining to medical service in Virginia.
   - A. Study medical services available to indigents and medically indigent.
   - B. Study hospitalization available for indigents and others.
   - C. Assist in development of local health units, health centers (with proper facilities), and hospitals.

III. Study, sponsor and support proper legislation —local, state, and federal.
   - A. Exercise one's right of franchise and encourage others to vote.
   - B. Study existing legislation.
   - C. Consider proposed legislation and suggest desirable laws.
   - D. Support or oppose the enactment of legislation on the basis of its merits.

IV. Advise, endorse and assist in the extension of medical service.
   - A. Study of Virginia medical service plans.
   - B. Inform members of each component sociciety of
     1. Existing medical service plans in operation in Virginia.
     2. Consider any improvement and extension of medical service.
     3. Endorse and support and participate in medical service plans.

V. Stimulate and integrate medical thinking and support policies and objectives of the Medical Society.
   - A. Conduct discussion in component societies of policies and objectives.
   - B. Attack the problems in determined agreement over each objective adopted by the State Society.

HENRY S. JOHNSON, *Director,*
Public Relations and Medical Care,
Medical Society of Virginia.

PUBLIC HEALTH

I. C. RIGGIN, M.D.
State Health Commissioner of Virginia.

The report of the Bureau of Communicable Diseases of the State Department of Health for May, 1946, as compared with the same month in 1945, and for the period of January through May, 1946, compared with the same period in 1945, follows:

	May 1946	May 1945	Jan.-May 1946	Jan.-May 1945
Typhoid and Paratyphoid	4	8	28	23
Diarrhea and Dysentery	165	91	723	1,021
Measles	2,837	166	9,836	1,069
Scarlet Fever	233	287	1,746	2,301
Diphtheria	32	14	200	117
Poliomyelitis	2	2	8	14
Meningitis	17	23	132	143
Undulant Fever	6	1	19	9
Rocky Mountain Spotted Fever	6	5	8	8
Tularemia	3	4	29	17

INFANT MORTALITY IN THE STATE IN 1945

There were 3,095 deaths of infants under one year in Virginia last year, of which 1,947 were white and 1,148 were colored. The infant death rate maintained its low wartime record in 1945. Although the total rate of 48.5 per 1,000 live births in 1945 was slightly higher than the rate (48.3) for the preceding year, it showed a 27 per cent reduction over the last prewar year (1941) when the rate was 66.8. The white rate (41.3) last year represented a 4 per cent decrease over the year 1944, while the colored rate (69.1) in 1945 showed an 8 per cent increase.

Among deaths of infants under one year, 1,799 occurred during the first month of life, giving a total neonatal rate of 28.2 per 1,000 live births. This represents a rate *decrease* of 4 per cent over 1944. During the most dangerous period of infant life (under one day) there were 805 deaths, with a rate of 12.6 in 1945, in comparison with a rate of 13.7 for the previous year. For the past few years, the increased proportions of medical attendance and hospitalization at birth are reflected in lowered mortality for very young infants.

Among the causes of death associated with early infancy, premature birth (the greatest cause of infant mortality) showed a reduction to 860 in 1945 from 977 in 1944, and deaths from injury at birth declined to 246 last year from 288 for the previous year. Deaths from congenital malformations, however, increased slightly in 1945 to 287 from 274 for the preceding year, and other diseases of early infancy rose to 317 from 307 in 1944.

During the past three decades the greatest reduction in infant mortality has been among infants one to eleven months of age. This was due, for the most part, to a reduction in mortality from the infections, respiratory, and gastrointestinal diseases. Contrary to the usual trend, however, last year in the State deaths among infants one to eleven months of age showed an *increase* in death rate. The rate of 18.9 per 1,000 live births in 1944 rose to 20.3 last year, a gain of 7 per cent.

Deaths from the respiratory diseases among infants under one year showed an increase to 454 deaths in 1945 from 421 for the previous year, and the gastrointestinal causes to 335 from 268 in 1944. On the other hand, deaths from the infectious diseases declined to 213 from 262 during the preceding year.

In spite of a spectacular decline in infant deaths during the past 30 years in the State, there is still an appalling loss of life during infancy. Much can be done, however, to bring infant mortality to the irreducible minimum.

COUNCIL
MEDICAL SOCIETY OF VIRGINIA
Special Meeting

A special meeting of the Council was held at the Society's office in Richmond on May 29th, with the president, Dr. Julian L. Rawls, presiding. Others present were: Dr. W. L. Powell, president-elect; Dr. H. B. Mulholland, past president; Drs. J. D. Hagood and W. L. Peple, vice-presidents; Drs. R. B. Bowles, C. L. Harrell, Carrington Williams, J. L. Hamner, W. A. Porter, J. R. Gorman, Alex. F. Robertson, Jr., and J. E. Knight, councilors; Dr. M. P. Rucker, editor; Dr. I. C. Riggin, State Health Commissioner; Dr. J. M. Emmett, chairman, Committee on Public Relations and Medical Service; Mr. Henry W. Johnson, director, Public Relations and Medical Service; and Dr. H. H. Earp of the Veterans Administration.

Dr. Rawls stated that the purpose of the meeting was to discuss plans for providing medical care for beneficiaries of the Veterans Administration. This was one of the subjects discussed at a conference in Philadelphia recently, and he felt Virginia doctors would like to do what they can for the care of veterans suffering from service connected disabilities. He introduced Dr. Earp, representing the Veterans Administration, that he might tell how this service is handled in other states.

Dr. Earp said that Michigan and New Jersey handled these cases through Medical Service plans already in operation in those states, and they had added seven to eight per cent to the schedule of fees adopted by their societies in order to cover the cost of clerical and paper work. The Medical Service organization pays the doctors and bills the administration for the service. In Kansas the State Medical Society takes over the work, with the addition of necessary stenographic and clerical services. West Virginia adopted a modification of the Kansas plan and has the doctor bill the administration direct. He said it is the wish of his organization to have each State draw up its schedule of fees and submit them to the administration for approval. In answer to a question, he stated the case must be a service connected disability and the doctor must have authorization. If found by their rating man not to be service connected, the doctor will be paid for emergency attention and, if the patient can travel, he should be sent to the nearest Veterans hospital.

Dr. Rawls said that the question had been raised by some doctors as to the large amount of paper work that would be required. It was explained that doctors in making examinations would have to fill in only that part of the forms which applied to their individual work. North Carolina has only one medical service plan and works through that organization, but, as Virginia has several of these plans, it was thought better for them to adopt the West Virginia plan.

Being asked if there is delay in payment of bills, Dr. Gorman said he had done work for the VA in Roanoke and he felt he could answer that question by saying if bills are rendered promptly on the first of the month, payment will be made promptly. It was also asked if veterans could enter veterans hospitals for non-service disabilities. The reply was that veterans could be treated in these hospitals in such case if they signed forms stating they are medically indigent.

Following the discussion, motion was made that a committee be appointed to agree on what they think fair fees for service, submit the schedule to the Veterans Administration for their approval, and then send to members of the Society, asking them to sign and return cards enclosed showing their willingness to enter into the arrangement. Dr. Earp said he hoped the fees adopted by the Society would be adopted for all doctors in the State and not only for those who sign up. In the discussion, statement was made that the Council assumed no financial obligation in regard to the plan, and Dr. Harrell said he felt the Committee should be composed of at least five members of the Society. The motion was then adopted.

Dr. Rawls said the Mid-Atlantic States Regional Conference on Medical Service and Public Relations was held recently in Philadelphia, at which there were four representatives from Virginia. Each state was asked to contribute $150.00 a year for the clerical help and material necessary in sending out literature with regard to the problems confronting the medical profession. Dr. Mulholland moved that the appropriation of $150.00 be paid. This was seconded and carried.

Dr. H. H. Trout, chairman, Procurement and Assignment Service for Virginia, had sent the secretary a letter from the Service in Washington, in which she was requested to ask that his records in that work be transferred to the State Society office. Dr. Rawls said that the secretary had informed him there was no space in which to store these, as Dr. Trout had said it would make a package about 3 x 5 feet, and wished to know what should be done. Dr. Mulholland moved that the Society accept these files as soon as space is available. Seconded and carried.

Dr. Williams said he had been instructed by the Richmond Academy of Medicine to present to the Council a schedule of revised fees they had adopted for use by the Richmond Medical Service Association, as some of the Academy members were not satisfied with the schedule and, as authorized, he suggested that the Council accept the document, which was rather long, and submit it to the Medical Service Association. Dr. Mulholland objected to the Council accepting this, and Dr. Rucker asked why it might not go to the Association direct from the Academy. Motion was then adopted that the Council feels that this document should be sent direct from the Richmond Academy of Medicine to the Virginia Medical Service Association. Seconded and carried.

Recess was then taken for lunch.

Resuming business, Dr. Rawls introduced Mr. Johnson, the newly appointed Director of Public Relations, and explained that since he had come to the Society, he had been sent to states which have been outstanding in medical service and public relations that he might get their viewpoint.

Mr. Johnson spoke of his visits to the several states, laying special stress on the work in New York where he also attended the State meeting. There they take the press into their confidence, have a room for the press at their meetings and copies of addresses in their hands before they are presented to the Society.

As far as the Wagner-Murray-Dingell Bill is concerned, he felt if it did not go through at this Congress, it will come back in another guise as there seems a desire to do something for medical care at a lower rate.

Mr. Johnson presented tentative policies with respect to Public Relations and the Five-Point Program for the Medical Society of Virginia which had been approved by the Public Relations and Medical Service Committee on the previous evening. These follows:

PUBLIC RELATIONS POLICIES

1. Maintain an office of public relations to serve the public and the medical profession.
2. Support a program of public relations embracing the following activities:
   - A. Meeting with component societies.
   - B. Conferences with individual doctors.
   - C. Forums—on timely subjects.
   - D. Work with cohesive groups.
   - E. Bulletins—of special importance.
   - F. Press releases.
   - G. Radio Programs.
   - H. Other items to the best interests of the medical profession in Virginia, and extension of medical service.
3. Adopt Medical Society's Five Point Program.
4. Affect a united effort to extend medical service and hospitalization.
5. Advise public of medical service problems and the efforts of the medical profession to solve these problems.

FIVE-POINT PROGRAM

I. Inform the Public.
   - A. What the medical profession
     1. Has done
     2. Is doing
     3. Hopes to do
   - B. As to some of the problems of the medical profession in rendering medical care.
   - C. As to what the public can do to aid in a better medical service program.

II. A Study and Survey of Matters Pertaining to Medical Service in Virginia.
   - A. Study medical services available to indigents and medically indigent.
   - B. Study hospitalization available for indigents and others.
   - C. Assist in development of local health units, health centers (with proper facilities), and hospitals.

III. Study, Sponsor and Support Proper Legislation—Local, State and Federal.
   - A. Exercise one's right of franchise and encourage others to vote.
   - B. Study existing legislation.
   - C. Consider proposed legislation and suggest desirable laws.
   - D. Support or oppose the enactment of legislation on the basis of its merits.

IV. Advise, Endorse and Assist in the Extension of Medical Service.
   - A. Study of Virginia medical service plans.
   - B. Inform members of each component society
     1. Existing medical service plans in operation in Virginia.
     2. Consider any improvement and extension of medical service.
     3. Endorse and support and participate in medical service plans.

V. Stimulate and Integrate Medical Thinking and Support Policies and Objectives of the Medical Society.
   - A. Conduct discussion in component societies of policies and objectives.
   - B. Attack the problems in determined agreement over each objective adopted by the State Society.

This had been presented to the Public Relations and Medical Service Committee the previous evening and the chairman, Dr. Emmett, said they felt the plan offers ideas to start the work. He said the Committee further felt that, in order to do his best work, Mr. Johnson would need separate offices and the set-up should be commensurate with the Society's income, but he understood offices could not be secured in the present building. He should also have necessary secretarial aid, and the Committee hoped the Council will add to the already established budget an amount sufficient that Mr. Johnson's department might function as they expect it to. He stated they did not expect an amount comparable with that in some of the larger states with which they had conferred, but he hoped the Council would authorize an additional $4,000.00 (though it may not require that much) to secure the physical equipment and for operating expenses in starting the work.

After discussion, motion was made and carried that a sum be added to the appropriation already provided for the office of Public Relations and Medical Service, sufficient for the office to be set up and function subject to the discretion of the Committee on Public Relations and Medical Service and the President. Dr. Rawls then appointed a committee composed of Dr. Carrington Williams, chairman, and Drs. Rucker and Riggin to help Mr. Johnson to select the proper location and get established in his office.

At this time, Dr. Mulholland moved the adoption of the Five Point Program as suggested by Mr. Johnson. This was seconded by Dr. Harrell, with the addition that it be published in the MONTHLY, and be made a press

release, following its appearance in the journal. Carried.

Dr. Rawls said that at the Committee meeting the previous evening, one of the subjects mentioned was a bill introduced in the U. S. Senate by Senator Taft and he asked Dr. Riggin to tell the Council of this.

Dr. Riggin said that Senator Taft disagreed with the Wagner-Murray-Dingell Bill and he, Senators Smith and Ball had offered a substitute bill which he believes is a good one and much better than the Wagner-Murray-Dingell Bill. This calls for the appropriation of $200,000,000 for the fiscal year ending June 30, 1947, and for each of the four succeeding years, to be administered by the States for medical service for families and individuals with low income, the states to contribute in proportion to the amount allotted each. He felt this is the best medical legislation to come out of Congress and the medical profession should get back of this bill one hundred per cent, as some medical legislation is going to be put over. He also suggested that the Council present this before the county societies.

There being no other business, Dr. Rawls said he would like to appoint the following committee to prepare a schedule of fees for the care of veterans with service connected disabilities, this to be presented to the Veterans Administration for approval: Dr. J. M. Emmett, chairman; Drs. H. B. Mulholland, J. R. Gorman, George A. Duncan, Alex. F. Robertson, Jr., and Mr. Johnson as secretary.

Adjournment followed.

AGNES V. EDWARDS,
Secretary.

Approved.
JULIAN RAWLS,
President.
June 8, 1946.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. P. M. CHICHESTER, Richmond
President-Elect—MRS. J. E. HAMNER, Petersburg
Recording Secretary—MRS. NATHAN SCHUMAN, Alexandria
Corresponding Secretary—MRS. L. C. BRAWNER, Richmond
Treasurer—MRS. REUBEN F. SIMMS, Richmond

Change of Address.

Mrs. P. M. Chichester and son have joined Dr. Chichester in Richmond. Their present address is 821 West Franklin Street, Richmond 20.

Northern Neck Auxiliary.

Under the leadership of Mrs. Paul Pearson, immediate past president and chairman of organization, an auxiliary to the Northern Neck Medical Society was organized on May 23rd.

The meeting was an interesting and enthusiastic one. There were nine women present. Other physicians' wives have expressed their interest and promised support of the work undertaken.

A message of congratulations and welcome was sent by the State President of the Auxiliary. The following officers were elected: President, Mrs. Paul Pearson; vice-presidents, Mrs. B. H. B. Hubbard and Mrs. E. R. Moorman; secretary, Mrs. Lee S. Liggan; treasurer, Mrs. P. E. Lilly; historian, Mrs. Robert Booker; publicity chairman, Mrs. V. L. Litsinger; Hygeia, Mrs. Moorman; and program and health, Mrs. Pearson.

Arlington Auxiliary Organized.

The first meeting was held on Thursday, June 6th, at the Washington Golf and Country Club. We had as our guests Mrs. P. M. Chichester and Mrs. Clyde West of Alexandria. Mrs. Chichester explained the functions of an Auxiliary, after which officers were elected: President, Mrs. Albert J. Orlosky; president-elect, Mrs. J. H. Walton; vice-president, Mrs. Richard Sutton; recording secretary, Mrs. George Stuart; corresponding secretary, Mrs. Robert W. Lee; treasurer, Mrs. Jerome Cope; historian, Mrs. J. R. McGriff; and parliamentarian, Mrs. W. C. Welburn, all of Arlington.

The Advisory Council, appointed by the President of the County Society, includes Dr. Raymond Hutchinson, Dr. George Stuart, and Dr. J. R. McGriff.

NANCY C. ORLOSKY (MRS. ALBERT J.)

Richmond Auxiliary.

Dr. Arthur B. Gathright, Jr., Acting Director of the Cancer Prevention Clinic at the Medical College of Virginia, was the guest speaker at the March luncheon meeting of the Auxiliary to the Richmond Academy of Medicine. His subject was "Cancer Prevention Clinics". After discussing cancer in general, he traced briefly the history of the early diagnosis clinics in the United States and the or-

ganization of the Cancer Prevention Clinic at the Medical College of Virginia for medically indigent patients. He pointed out that the function of the Cancer Prevention Clinic is purely diagnostic, the patients being referred back to the referring physician, or if they have no physician, and so desire, they are referred to the appropriate department of the Hospital or Out-Patient Clinic.

JULIA R. PASTORE (MRS. P. N.)

Norfolk Auxiliary.

The Woman's Auxiliary to the Norfolk County Medical Society met May 28th at the home of the president, Mrs. C. M. McCoy. The slate of officers was presented by Mrs. Southgate Leigh, Jr., chairman of the nominating committee, as follows: Mrs. Charles H. Lupton, president; Mrs. K. W. Howard, president-elect; Mrs. J. R. St. George, Mrs. M. F. Brock, and Mrs. N. C. Salley, vice-presidents; Mrs. T. N. Spessard, recording secretary, and Mrs. P. B. Parsons, assistant; Mrs. Mallory S. Andrews, treasurer, and Mrs. M. S. Harrington, assistant; Mrs. W. L. Taliaferro, corresponding secretary, and Mrs. Ben Steingold, assistant; Mrs. James W. Anderson, historian; and Mrs. T. Elmore Jones, parliamentarian. The election will take place when the Auxiliary resumes activity in the Fall.

The Auxiliary voted a contribution of $25.00 to the new Mental Hygiene Clinic, to be spent for medical books. The contribution is from the fund for the doctors' gift. The balance will be spent for such a gift that the doctors may need or wish at such time as a need is felt.

It was announced that the meeting of the Medical Society of Virginia and the Auxiliary will be held October 14-16 at the Cavalier, Virginia Beach, and the Southern Medical Association will meet in Miami in November.

Tea was served following the meeting.

CLARA P. BROCK (MRS. M. F.)
Chairman, Press and Publicity.

BOOK ANNOUNCEMENTS

Cornell Conferences on Therapy. Edited by Harry Gold, M. D., Managing Editor; David P. Barr, M.D.: McKeen Cattell, M.D.; Eugene F. DuBois, M.D.; and Charles H. Wheeler, M.D. Volume One. New York. The MacMillan Company. 1946. xix-322 pages. Cloth. Price $3.25.

In 1937 the departments of medicine and pharmacology of Cornell University Medical School began a series of conferences, the purpose of which was to develop an interest in rational therapeutics and to enrich therapeutic practice by weaving the science of pharmacology into the art of treatment. As participants in the conferences members of every department of the medical college and hospital, students and visitors were invited. From the beginning this venture was an immediate success, many of the conferences having been published in the journal of the American Medical Association and the New York State Journal of Medicine.

The conduct in which the conferences are conducted is very informal and this book depicts very faithfully this atmosphere. It contains the kind of information that the average practitioner will welcome.

In the present volume is discussed such topics as Use and Abuse of Bed Rest, Hypnotics and Sedatives, Treatment of Heart Failure, Digitalis and Digitoxin, the Use of the Mercurial Diuretics, Treatment of Poisoning, and other topics of equal general interest. The reviewer cannot recommend too highly to physicians generally this excellent series of conferences.

H. B. HAAG.

Modern Management in Clinical Medicine. By F. KENNETH ALBRECHT, M.D., S.A. Surgeon. U. S. Public Health Service; Kansas State Tuberculosis Consultant; Formerly Clinical Director, U. S. Marine Hospital, Baltimore, Md. Baltimore. The Williams & Wilkins Company. 1946. ix-1238 pages. Illustrated. Cloth. Price $10.00.

This is an interesting volume which should serve the American doctor as an excellent refresher course in the clinical management of the patient. It is essentially modern and complete in the newer developments of medical practice; especially pertinent is an evaluation of the Kenny treatment; geriatrics; arthritis; allergy; and infectious diseases of post-war importance.

The author is to be commended for the brevity and clarity of the presentation. This book is especially recommended for the general practitioner who wishes a workable and extremely modern review of all phases of medicine.

LOUIS KOLIPINSKI, M.D.

SHOULD WE CHANGE OUR PRESENT STANDARD ON INFANT VIABILITY?*

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

The birth of a premature infant invariably arouses interest and invites speculation as to what constitutes the lower limit of viability. Periodically, one encounters newspaper articles giving the impression that the particular infant is the smallest on record. The subject should be of special interest to those doing obstetrics since upon the accoucher commonly falls the responsibility for the immediate postnatal care for the survival of these infants. Various criteria are used to determine whether a foetus is viable. On the basis of the duration of pregnancy, a foetus that has remained in utero 26 to 28 weeks is generally said to be viable. In terms of body length, this corresponds to about 35 to 36 cm. Another standard is set by law, which varies among states, but usually requires birth and death certificates for an infant when the duration of gestation is five months or more. Sixteen states and the District of Columbia have other legal limits varying from that of Maryland (any recognizable product of conception) to those of Washington and Indiana (seven months or more). A point which should be obvious is that such criteria do not make survival impossible for infants who fail to measure up to them.

It is accepted that the prognosis for survival of an infant varies with its weight. Those weighing less than 1,000 grams (2 pounds, 3 ounces) do not have a very good outlook, yet a survey of the literature shows that at least 54 such cases are on record. The smallest surviving infant had a minimum recorded weight of 420 grams. The smallest of three such infants born at the University of Michigan Hospital weighed 705 grams (1 pound, 9 ounces).

One often encounters the contention that the prospects for satisfactory mental and physical development of very small premature infants do not justify the prolonged and tedious care which they require. It has been quite definitely shown by Hess, Mohr and Bartelme that, excluding cases with birth injuries, premature infants show development comparable to that of normal infants. Physical growth in early years tends to lag somewhat behind that of term infants.

The great amount of special care and equipment necessary for a premature infant generally involves considerable expense. Are they worth it? If we use for comparison the care of patients afflicted with tuberculosis or malignant disease in which the outlook is often poor indeed, then the answer must be in the affirmative.

To designate a given weight, or the lower limit of viability, can have no particular virtue except for statistical purposes. It can promote the belief that no infant weighing less than such a standard can survive and, therefore, does not merit detailed attention. If there must be a standard, let it be based on recorded survivals. It is suggested that 1,000 grams (2 pounds, 3 ounces) would be a reasonable weight limit.

The number of recorded infants weighing less than 1,000 grams who have survived is not great, yet there are enough to show that every infant, no matter how premature, deserves full attention.

*Excerpts from a report by Doctor R. L. Haas, Ann Arbor, Michigan, from the Department of Obstetrics and Gynecology, University of Michigan Hospital. *American Journal of Obstetrics and Gynecology*, October, 1945.

Wyeth Makes Methionine Available.

Through arrangements made with U. S. Industrial Chemicals, Inc., New York, Wyeth Incorporated has been the first pharmaceutical firm in the country to make synthetic dl-methionine available to the medical profession in sufficient quantity for experimental clinical purposes. Production has still not reached the point where larger than investigational quantities can be offered through regular drug channels, but this point is not far off.

The pharmacological evidence which first established the specific value of methionine in liver damage (fatty infiltration, cirrhosis and necrosis) due to dietary, toxic and injury factors was the work of many scientists, both in America and in England. Prominent among these has been the research staff of the Wyeth Institute of Applied Biochemistry, in Philadelphia.

EDITORIAL

The Proposed National Health Act of 1946

WITH the many bills relating to national medical care and services which have been introduced in the Congress during the past several months, it is almost impossible for one to be familiar with all their details, the subjects covered, or the far reaching effects if all or even some of the proposed legislation were enacted into law.

In May, 1946, Senate Bill 2143 was introduced into Congress by Senator Taft (for himself, Mr. Smith and Mr. Ball). This proposed legislation differs in many respects from other legislation introduced relating to medical care.

Senate Bill 2143 proposes that the many health activities undertaken and carried on by the various departments, bureaus, and divisions of the federal government be coordinated into a single independent agency of the executive branch of the government. This agency would be known as "The National Health Agency". It is further proposed that the agency be headed by an administrator who shall be a Doctor of Medicine with certain qualifications.

This legislation authorizes the appropriation of $200,000,000 by the Federal Government for each year of a five year period beginning with the fiscal year ending June 30, 1947. These funds are to be expended by the State in providing general health, hospital and medical services for individuals of low income. The allotment of funds is to be made after a State Plan has been submitted and approved by the Surgeon General of the United States Public Health Service. A similar provision is made for the allocation of funds for dental service, the amounts being $8,000,000 for the year ending June 30, 1947, $12,000,000 for the fiscal year ending June 30, 1948, $16,000,000 for the fiscal year ending June 30, 1949, and $20,000,000 each for the fiscal years ending June 30, 1950 and June 30, 1951.

It is worthy of note that following approval of the State plans submitted to the Surgeon General, the administration of the program and expenditure of funds are entirely under State and local governmental administrative control. A condition to receive allotment of funds from the Federal Government under this legislation, requires a survey of all health activities within the State with particular attention being paid to the medical care provided for the lower income groups. In general, the use of these funds requires that the State and its governmental subdivisions must participate to the extent of at least twice the amount of Federal funds allocated. In other words, State and local funds must amount to at least 66⅔ cents of each dollar expended.

The Federal funds would be derived from the general funds of the Federal Treasury and not from compulsory taxation for these specific purposes. Funds are provided also for dental and neuropsychiatric research. State plans, as submitted, must include provisions for medical and dental examination of all school children. These examinations would be made without charge but treatment provided only for those unable to pay. Encouragement for voluntary health, medical and hospital insurance plans is given by reason of the fact that the State may make payments of premiums to such organizations in behalf of those unable to pay the whole cost of this insurance. In a word, this legislation proposes an allotment of Federal funds to the States for general health, medical, and hospital services for those unable to pay for the cost of such services in whole or in part.

The administration of the plans rests solely within the States. This proposed legislation does not endeavor to provide overall medical service and hospitalization in all

its aspects for all the people but does provide that the States shall administer general health, medical and hospital services for those unable to secure it for themselves. It seems this is a sane and logical approach to the question.

Every physician should give careful thought and study to this proposed legislation and draw his own conclusions as to whether or not the best interests of the American people will be served by the enactment of this bill, rather than through legislation which would attempt to provide so-called free medical and hospital service for all the people.

I. C. RIGGIN.

In the Balance

MEDICINE in America is facing the greatest crisis in its history. It is on trial for its very existence and the judges are not those of a court of justice, but the Congress of the United States. Congressmen are admittedly out to give the people what they want (or what they think they want). Powerful pressure groups are attempting to mold public opinion with skilfully concocted half-truths and misstatements. If anyone doubts this, let him read the testimony of the witnesses in favor of the Wagner-Murray-Dingell bill. Their testimony follows the same pattern and their "facts" evidently have the same source. Eventually the side with the best public relations will win.

Several State Medical Societies have employed well-known firms of business advisers to survey the situation and map out a future course. These experts have advised various things, but they all agree that the most potent force in establishing good public relations is a satisfied customer, and conversely a dissatisfied customer is ruinous. Sometimes it is hard to find out why a patient is dissatisfied. Not infrequently, when a doctor has done a particularly good job the patient is disgruntled, and quite frequently the reverse is true. What the doctor sells is service, and a service the quality of which is particularly hard to measure. Often the thoughtless remark of another doctor determines the patient's idea of the kind of service he has received.

Then, too, patients are prone to become confused about medical matters. They get the directions that you so carefully give them all mixed up, and what you have told them about the nature and prognosis of their disease is not recognizable when the patient repeats it a day or two later. Your editor has two hard and fast rules: (1) never to make a positive diagnosis of early pregnancy, and (2) never to tell a woman that she cannot get pregnant; and yet scarcely a month goes by without his being accused of breaking both rules. If the patient becomes so mixed up when he is talking to his own doctor, what can one expect when he is talking to some other doctor? Dr. Osler used to say, "Never believe what a patient says about another doctor." It is a good rule to keep constantly in mind. When a patient censures Dr. A to Dr. B, it is just a matter of time before he will be finding fault with Dr. B to Dr. C. It is small comfort to Dr. A or Dr. B to know that his tale is greatly exaggerated, if, indeed, there be any truth in it at all.

Organized Medicine is urging that local medical societies get the A. M. A.'s Ten Point Program into operation as soon as possible. "The most urgent need in putting the Ten Point Program into action is increased enrolment in prepayment Medical Care Plans." Along with this obligation of Medical Societies is the duty of individual physicians to see that there are no dissatisfied patients—either his own or his neighbor's.

SOCIETIES

The Northern Neck Medical Society

Held its regular meeting on May the 23rd, with a good attendance, including several visitors. At the business session, delegates and alternates were elected to the Virginia Beach meeting of the State Society. Officers of the Society are: President, Dr. G. Blight Harrison, Fredericksburg; vice-presidents, Dr. C. Y. Griffith, Machodoc, and Dr. R. E. Booker, Lottsburg; and secretary-treasurer, Dr. Lee S. Liggan, Irvington.

The Amelia County Medical Society

Held its annual meeting on May the 20th, at which time the following officers were elected for the ensuing year: President, Dr. James T. O'Neal, Amelia; vice-president, Dr. G. A. Arhart, Amelia; and secretary-treasurer, Dr. James L. Hamner (re-elected), Mannboro. Delegate and alternate to the State meeting were also elected at this time.

Tazewell County Medical Society.

Officers for this Society for 1946 are: President, Dr. A. D. Parson, Richlands; vice-president, Dr. Mary Elizabeth Johnston, Tazewell; and secretary-treasurer, Dr. J. A. Robinson, Richlands.

The Wise County Medical Society

Met at Norton on May 9th and the thirty doctors present were entertained at a steak banquet by Drs. C. L. Harshbarger and his staff of the Norton General Hospital. Delegate and alternate were elected to the State meeting in October. Dr. J. A. Abercrombie, Richlands, presented a most scholarly and comprehensive paper on "Head Injuries". Dr. Frank Smith, Councilor of the Ninth District, spoke of his early retirement from the State Board of Medical Examiners and made suggestions as to his successor. Drs. J. J. Porter and James Williams, Richlands, who have just been released from the Navy, spoke of their interesting work and experiences while in the Service. Drs. Ernie J. Benko, Norton, H. S. Silliman, Salem, and A. H. Bond, Norton, were elected to membership.

Dr. J. D. Culbertson is president of this Society and Dr. T. J. Tudor, secretary-treasurer.

NEWS

Have You Made Your Reservations?

We hope you are planning to attend the Annual Meeting of the Medical Society of Virginia at The Cavalier, Virginia Beach, October 14-16, and that you have already made your reservations. However, if you have overlooked this, write at once to The Cavalier as all reservations are being handled direct with them. As soon as this hotel is filled, you will be placed in one of the other hotels, conveniently located.

From all signs, this meeting should be the best ever held. The program is being prepared at this time and promises to be of unusual interest. Reservations have already been made for thirty-five technical exhibits and scientific exhibits are coming in also.

October at Virginia Beach is a delightful time of the year—not too hot and not too cold! A few days' relaxation will perk you up for the long winter ahead—so come on and make your reservations at once!

News Notes, Medical College of Virginia.

Major faculty promotions and new appointments, some made during the session 1945-46, and others effective July 1, 1946, are given below:

Dr. T. Neill Barnett from assistant professor of medicine to associate professor of clinical medicine.

Dr. Nathan Bloom from assistant professor of medicine to associate professor of medicine.

Dr. Douglas G. Chapman from associate in medicine to assistant professor of clinical medicine.

Dr. Marshall P. Gordon, Jr., from associate in urology to assistant professor of urology.

Dr. Erling S. Hegre from assistant professor of anatomy to associate professor of anatomy.

Dr. Guy W. Horsley from assistant professor of surgery to associate professor of surgery.

Dr. Roscoe D. Hughes from assistant professor of biology to professor of biology.

Dr. William R. Jordan from associate in medicine to assistant professor of clinical medicine.

Dr. Karl L. Kaufman from associate professor of

pharmacy to professor of pharmacy.

Dr. Paul S. Larson from research associate in pharmacology to associate professor of research pharmacology.

Dr. R. Campbell Manson from instructor in dermatology and syphilology to assistant professor of clinical dermatology and syphilology.

Dr. Allen Pepple from instructor in dermatology and syphilology to assistant professor of clinical dermatology and syphilology.

Dr. Benjamin W. Rawles, Jr., from associate in surgery to assistant professor of surgery.

Dr. Edward S. Ray from associate in medicine to assistant professor of medicine.

Dr. Leroy Smith from associate in surgery to assistant professor of surgery.

Dr. Maynard P. Smith from associate in otology, rhinology, and laryngology to assistant professor of otology, rhinology, and laryngology.

Dr. Lewis T. Stoneburner, Jr., from associate in medicine to assistant professor of clinical medicine.

Dr. George N. Thrift from associate in otology, rhinology, and laryngology to assistant professor of otology, rhinology, and laryngology.

Dr. Elam C. Tooné, Jr., from associate in medicine to assistant professor of medicine.

Dr. James T. Tucker from assistant professor of orthopedic surgery to associate professor of orthopedic surgery.

Dr. Harry Walker from associate professor of medicine to professor of clinical medicine.

Dr. T. B. Washington from associate in urology to assistant professor of urology.

Dr. J. H. Weatherby from research associate in pharmacology to associate professor of research pharmacology.

Dr. B. R. Wellford from associate in otology, rhinology, and laryngology to assistant professor of otology, rhinology, and laryngology.

Dr. George Z. Williams from associate professor of pathology to professor of pathology.

Dr. J. Powell Williams from associate professor of medicine to professor of clinical medicine.

Dr. W. C. Winn from assistant professor of obstetrics to associate professor of obstetrics.

NEW APPOINTMENTS: Dr. Randall L. Thompson, associate professor of bacteriology and parasitology; Dr. William A. Summers, assistant professor of bacteriology and parasitology; Dr. Charles E. Troland, assistant professor of neurological surgery; Dr. Delbert V. Kechele, assistant professor of radiology; Miss Margaret Denniston, associate professor of nursing; Dr. Dwight C. Atkinson, assistant professor of exodontia and radiology; Dr. T. Wiley Hodges, assistant professor of orthopedic surgery.

Dr. Charles M. Caravati,

Richmond, having recently been released from Service, announces the reopening of his office at 807 West Franklin Street. Dr. James M. MacMillan, late Major, MC., AUS., and formerly of the Henry Ford Hospital Clinic, is associated with him, their practice being limited to internal medicine with particular attention to gastroenterology.

Dr. R. Campbell Manson,

Richmond, announces the removal of his office to 810 West Franklin Street, where he will limit his practice to dermatology and spyhilology. He has recently returned from overseas where he was with the 45th General Hospital and has been associated with Dr. T. W. Murrell.

Dr. William S. Sloan

Has opened offices in the Medical Arts Building, Petersburg, having recently returned from the Mayo Clinic where he took special work in internal medicine and medical specialties. He was in the Service for over five years, his last assignment being that of commanding officer of the 174th General Hospital in France. Dr. Sloan is a graduate of Vanderbilt Medical School, class of 1933.

Dr. O. N. Shelton,

Recently of Orange, is now with the Veterans Hospital in Tucson, Arizona, where he is chief of tuberculosis.

Dr. James Volpe, Jr.,

Formerly of Jonesville, is now located at Five Points Clinic, 439 First Avenue, Yuma, Arizona.

Released From Service.

Others, not previously listed, who have returned from the Service and resumed their practice are:

Dr. Henry L. Gardner, Jr., Franklin, with the Raiford Memorial Hospital.

Dr. A. S. Hurt, Richmond, has resumed the practice of pediatrics at 1004 West Franklin Street.

Dr. James T. O'Neal is back in Amelia.

Veterans Administration.

Three Virginia specialists have been named in a recently announced list of 15 leading physicians and

surgeons appointed consultants to the Richmond Branch Medical Service of the Veterans Administration.

"These consultants," said Dr. Daniel B. MacCallum, branch medical director, "will work directly with the branch office and are separate from the group of more than 100 consultants now assisting in VA hospitals in the branch area, which includes Virginia, West Virginia, North Carolina, Maryland, and the District of Columbia."

Designated tuberculosis consultant is Dr. Dean B. Cole, of the Medical College of Virginia faculty, who is one of the few internists active in the American Association of Thoracic Surgeons.

Dr. Robert Finley Gayle, MCV professor of neuropsychiatry, has been made senior VA consultant in neuropsychiatry. Dr. E. C. Drash, of the University of Virginia staff, was named in thoracic surgery.

Another Virginian, Dr. James Greear, member of the University of Virginia class of 1920, and professor of ophthalmology at Georgetown University, is ophthalmology consultant to the VA branch.

Others named, with their designation, are:

Dr. Ralph M. Caulk, radiation therapy, and Dr. George M. Wyatt, radiology, both of Washington; Dr. Paul G. Reque, dermatology and syphilology, and Dr. Barnes Woodhall, neurosurgery and special consultant in peripheral nerve registry, both of Duke University, Durham, N. C.; and Dr. Francis P. Parker, pathology, of Emory University, Atlanta, Ga.

Baltimore, Md., contributed the largest single group, including Dr. Benjamin M. Baker, Jr., internal medicine; Dr. George Eaton, orthopedic surgery; Dr. Alfred Lieberman, otolaryngology; Dr. John Herman Long, gynecology; Dr. W. Houston Toulson, urology; and Dr. I. Ridgeway Trimble, general surgery.

Selected through the Dean's Committee at each of the cooperating medical schools, the consultants will be called upon to assist in maintaining standards of practice in the VA hospitals and will help direct the training of residents. Each consultant is engaged on a fee basis, receiving $50 per day. Travel expenses also are provided when necessary.

In addition to the increase in consultants, VA reports steady progress in the appointment of full-time and part-time staff members. Forty-nine full-time and 11 part-time doctors were added during the week ending June 7. This was exclusive of consultants, attending physicians and residents.

Dr. MacCallum reported that the 14 per cent pay increase which Congress made effective July 1 has resulted in increased interest among doctors in the area. Salary scales which originally ranged from $3,640 to $9,800 will now range from $4,149 for the junior grade to the legal maximum of $10,000. However, he explained, doctors certified by an American Specialty Board will continue to receive an additional 25 per cent up to the limit of $11,000.

Doctors serving as medical members of rating boards will receive from $5,905 to $6,862. A number of positions in this category are still open.

State Department of Health Personnel Changes.

Dr. H. E. Jenkins, recently released from medical services with the Navy, has been appointed, as of June 1, 1946, Health Officer of the Southside Health District.

Dr. O. Cameron Kress, recently released from medical services with the Navy, has been appointed, as of June 16, 1946, Health Officer of Orange County Health District.

Dr. Charles G. Souder, previously with the U. S. Navy and latterly with the American Red Cross, has been appointed, as of July 16, 1946, Health Officer of Loudoun County Health District.

Dr. S. S. Shouse, formerly Health Officer of Page-Warren-Shenandoah Health District, and recently returned from medical services in the Navy, has been assigned, as of June 5, 1946, Health Officer of Charlotte County Health District.

Dr. J. C. Neale, Jr., Assistant Director of Local Health Services, was transferred from the Southeast District Office at Norfolk, Virginia, to the Central Office in Richmond, effective June 1, 1946.

Dr. J. G. McNiel, Health Officer of the Southside District, was appointed Assistant Director of Local Health Services in charge of the Southeast District in Norfolk effective June 1, 1946.

Dr. Hugh H. Trout, Sr.,

Roanoke, has been appointed by Governor Tuck as a member of the Board of Visitors of the University of Virginia for a term ending February 1950.

Dr. Johns Honored.

The honorary degree of doctor of laws was conferred on Dr. Frank S. Johns, Richmond, at the recent commencement exercises of Hampden-Sydney

College. He is chairman of the Board of Trustees of the College.

Dr. Plecker Resigns.

The resignation of Dr. W. A. Plecker, veteran registrar of vital statistics in the State Health Department, became effective June 30th. A successor has not been named. Dr. Plecker planned to retire several years ago but remained in his position during the war years because of the manpower shortage in the Department.

Married.

Dr. Joseph Stuart Staley and Miss Dorothy Maxine Thomas, both of Marion, May 31st.

Dr. George S. Grier,

After taking a special course in the Department of Pathology, Medical College of Virginia, has returned to Newport News where he is located at 130 26th Street. His practice will be limited to internal medicine.

Honor to Whom Honor Is Due.

In a program, sponsored by the Gretna Chamber of Commerce on June 1st, Dr. Oscar Lee Ramsey, one of Pittsylvania County's oldest and most beloved physicians who has practiced in the Gretna community for forty years, was presented with an automobile as a token of the esteem held for him as a physician by his many friends and patients. Dr. Ramsey is also active in the civic, religious and social life of his community.

Stuart Circle Hospital,

Richmond, announces the opening of a Laboratory of Bacteriology on June 1, 1946. This laboratory will be operated by Mr. Forrest Spindle who has had 22 years of service with the Virginia State Health Department Laboratory, as senior bacteriologist.

During World War I Mr. Spindle was bacteriologist in laboratory of the Walter Reed General Hospital, Washington, D. C. His experience covers many fields of acute and chronic infectious diseases.

Clinical Bacteriology has assumed an increasingly important roll since the development of such drugs as the sulfa group, penicillin and streptomycin.

Internationally Known Speakers at College of Surgeons Assembly in Detroit.

Mr. Hamilton Bailey of London, England, will visit Detroit in October to deliver an address at the Eleventh Assembly of the United States Chapter, International College of Surgeons. His subject will be "Impending Death under Anesthesia".

Other eminent speakers and clinicians who will appear at the I. C. of S. clinics, and the Assembly to be held in Detroit's Masonic Temple, October 21-22-23, include:

Dr. Albert Jirasek of Prague, Dr. Francisco Grana of Lima, Peru, Dr. Lyon Appleby, Vancouver, B. C., Dr. Felipe Carranza of Buenos Aires, Dr. W. Wayne Babcock of Philadelphia, Dr. R. W. McNealy, Chicago, Dr. Wm. C. MacCarty, Rochester, Minn., Dr. Edwin L. Zander, New Orleans, Dr. Rudolph Nisson, New York, Dr. Max Thorek, Chicago, Dr. H. E. Billig, Los Angeles, Dr. S. W. Harrington, Rochester, Minn., and others.

Copy of program and detailed information, including housing arrangements, may be obtained by writing Dr. L. J. Gariepy, Secretary, 16401 Grand River Avenue, Detroit 27, Michigan.

Dr. Mundy Associated With Dr. Kyle.

Dr. Bernard H. Kyle, Lynchburg, announces that Dr. B. K. Mundy is now associated with him in the practice of orthopedic and fracture surgery with offices at 705 Church Street. Dr. Mundy is a graduate in medicine of the University of Virginia, class of 1939.

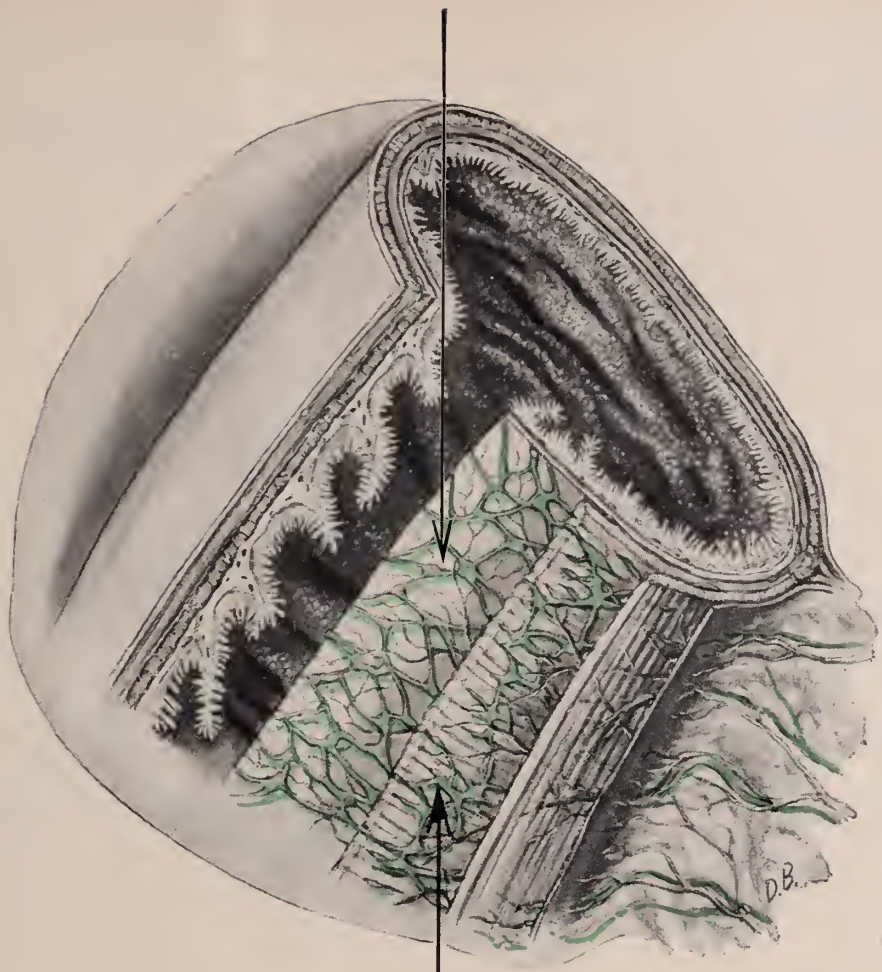
Dr. J. T. Ransone,

Who has recently completed five months' study at the Neurological Institute, New York, is locating in Newport News where he will limit his practice to neuropsychiatry. He was formerly in Salem.

American Association of the History of Medicine.

At the nineteenth annual meeting of this Association, held in Atlantic City, May 26-27, the following officers were elected: President, Dr. Richard H. Shryock, Philadelphia; vice-president, Dr. Henry R. Viets, Boston; secretary, Dr. Howard Dittrick, Cleveland; treasurer, Dr. Benjamin Spector, Boston; and editor, Dr. Henry E. Sigerist, Baltimore.

Among the papers presented were "Giles Heale, the Mayflower's Surgeon" by Dr. M. Pierce Rucker, Richmond, and "The 150th Anniversary of S. T. Soemmering's 'Organ of the Soul' (1796); the Reaction of his Contemporaries and its Significance Today" by Dr. Walther Riese, Richmond.



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Dr. William T. Moore,

Class of 1938, University of Virginia, is associated with Dr. H. C. Spalding at 820 West Franklin Street, Richmond, with practice limited to obstetrics and gynecology. He was recently released from the Service.

Dr. Stanley H. Macht,

Formerly of Crewe, has accepted the positions of Chief of the Department of Radiology in the Baltimore City Hospitals and Associate Professor of Radiology on the faculty of the University of Maryland Medical School. He has recently been taking a special course in radiology at the Jefferson Hospital, Philadelphia.

Dr. John Franklin Williams,

Richmond, announces the limitation of his practice to psychosomatic medicine. His offices are in the Medical Arts Building.

Raiford Memorial Hospital Clinics.

Following are schedules of two of the Summer Clinics that are to be held at the Raiford Memorial Hospital, Franklin:

July 25—2:30 P. M.:
"Gastro-Intestinal Disorders"

"Allergic Manifestations in the Gastro-Intestinal Tract," Dr. Oscar Swineford, Assistant Professor of Medicine, University of Virginia, Charlottesville.

"The Treatment of the Ulcer of the Stomach and Differential Diagnosis," Dr. H. B. Mulholland, Professor of Practice Medicine, University of Virginia, Charlottesville.

"Lesions of the Large Intestines," Dr. Clifford F. Gryte, Director of Internal Medicine, Raiford Clinic, Franklin.

August 29:
"Applied Physiology and Advances in Medicine"

"Fluid Balance," Dr. Harold Green, Professor of Physiology, Bowman Gray Medical School, Winston-Salem, North Carolina.

"Present Status of Penicillin," Dr. Harvey Haag, Professor of Pharmacology, Medical College of Virginia, Richmond.

"Vitamins and Minerals," Dr. David Cayer, Associate Professor of Medicine, Bowman Gray Medical School, Winston-Salem, North Carolina.

The American Gynecological Society

Held its sixty-ninth annual meeting at Hershey, Pennsylvania, June 3-5, under the presidency of Dr. Edward A. Schumann, Philadelphia. The following officers were elected: President, Dr. Norris W. Vaux, Philadelphia; 1st vice-president, Dr. M. Pierce Rucker, Richmond; 2nd vice-president, Dr. Walter T. Dannreuther, New York; secretary, Dr. Norman Miller, Ann Arbor; and treasurer, Dr. James H. Miller, Hartford. Dr. Rucker also presented a paper on "Constriction Ring Dystocia".

American Board of Obstetrics and Gynecology.

The next written examination (Part I) for all candidates will be held in various cities of the United States and Canada on Friday, February 7, 1947, at 2:00 P. M. Candidates in military service are requested to keep the Secretary's Office closely informed of changes in address.

Applications are now being received for the 1947 examinations. Closing dates for these applications will be November 1, 1946.

For further information and application blanks address Paul Titus, M.D., Secretary, 1015 Highland Building, Pittsburgh 6, Pennsylvania.

Appointment in E. E. N. T.

An appointment in E. E. N. T. is available October 1st at the Raiford Clinic, Franklin, Virginia. Address the Administrator, Raiford Memorial Hospital, Franklin, for further details. (*Adv.*)

The American Congress of Physical Medicine

Will hold its twenty-fourth annual scientific and clinical session September 4, 5, 6 and 7, inclusive, at the Hotel Pennsylvania in New York. Scientific and clinical sessions will be given each day. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual instruction courses will be held September 4, 5, and 6. These courses will be open to physicians and to therapists registered with the American Registry of Physical Therapy Technicians. For information concerning the convention and the instruction course, address the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

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Development of wider public understanding and appreciation of the contribution made by the medical profession and by medical research to the world's health and welfare is the objective of a new series of radio programs inaugurated over the Columbia Broadcasting System on June 4, at 9:30 P. M., Eastern Daylight Saving Time.

The half-hour program, known as "Encore Theater", presents radio dramatizations of famous films, novels, and biographies, dealing with medicine's immortals, as well as with the work, achievements and struggles of thousands of members of the medical profession who, although by-passed by fame, daily are making substantial contributions to the prevention and cure of disease, often at great personal sacrifice. Sponsor of the program is Schenley Laboratories, Inc., which for the past two years has sponsored a somewhat similar program dedicated to the medical profession, "The Doctor Fights".

The programs are designed to underline the scientific achievements of the medical profession, while stressing the human warmth and sympathy which often prompts members of the profession to sacrifice health and even personal life in order to serve others.

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Appointment in Pediatrics.

An appointment in Pediatrics is available immediately at Raiford Clinic, Franklin, Virginia. Address the Administrator, Raiford Memorial Hospital, Franklin, for further details. (*Adv.*)

OBITUARIES

Dr. William Curtis Gibson,

Prominent Suffolk physician, died June 10th, having been in failing health for more than a year. He was fifty-nine years of age and received his medical degree from the University of Pennsylvania in 1910. Dr. Gibson had practiced in Suffolk since his graduation, was formerly surgeon for the Norfolk and Western Railroad at Suffolk and for the Southern and Virginian Railways, having retired because of his health. He served in the Navy during World War I. Dr. Gibson had been a member of the Medical Society of Virginia for thirty-six years. His wife and a son survive him.

Dr. Ashby Clifford Byers,

Dean of Rockingham County physicians, died in Harrisonburg June 13th from a heart condition from which he had suffered for some time. He was seventy-one years of age and a graduate in medicine from the University of Maryland, class of 1901. Dr. Byers had practiced in Rockingham County since the horse and buggy days and had officiated at the birth of more than 6,000 children. He was active in civic and medical affairs, having served as coroner and health officer of Harrisonburg and Rockingham County. Dr. Byers was formerly a member of the Medical Society of Virginia. His wife and seven children survive him.

Dr. George F. Holler,

Waynesboro, died June 16th at a veterans hospital, where he had been a patient for two years. He was seventy years of age and graduated from the former Atlanta (Ga.) College of Physicians and Surgeons in 1901. Dr. Holler was a veteran of World War I and practiced in Waynesboro for twenty years after leaving the Service. He was formerly a member of the Medical Society of Virginia. A son and a daughter survive him.

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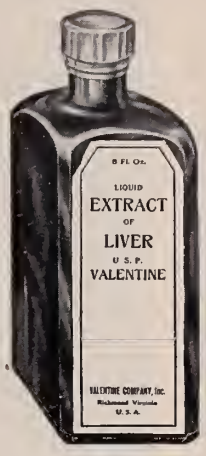

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Poison Reaction to Acid Used in "Cold Wave".

An acid used in the process of hair curling known as a "cold wave" has been found to produce symptoms of poisoning in allergic and anemic persons, according to Lawrence H. Cotter, M.D., of New York.

Writing in the June 15 issue of *The Journal of the American Medical Association,* Dr. Cotter, who is from the Department of Medicine, College of Physicians and Surgeons, Columbia University and the Presbyterian Hospital in New York, says that the "cases in which a toxic reaction has been observed appear to be on the increase."

Experience with patients having thioglycolic acid poisoning indicates, the author says, that "persons suffering from allergies and anemias are the most likely victims, but the acid has an established affinity for the protein molecule, and liver damage to some extent may be anticipated from prolonged exposure in any individual". However, in the majority of cases recovery occurs without permanent liver damage when the exposure is promptly terminated.

Among the several case histories cited by the author is one of a 52 year old woman who "had not handled any thioglycolic acid preparation but had a 'cold wave' of her own hair. As soon as the acid solution was applied she felt an intolerable burning sensation, which persisted for three days in spite of all attempts to wash off the acid. She also had severe cramps and itching all over the body." A week after receiving a second patch test from her doctor she had swelling of the hands and feet and enlargement of the armpit lymph nodes, as well as the itching and burning, and her hair came out in large patches.

When seen in the laboratory, this woman had dark patches on her skin and denuded areas on her scalp. She appeared emaciated and nervous. Eventually, the author says, "her symptoms cleared up except for an intermittent burning sensation of the scalp."

The author concludes: "Now that this product is being sold in the chain stores, its indiscriminate use will result in an increased incidence of poisonings, many of which are already finding their way to the courts. Adequate labeling and understanding of the dangers involved are imperative.

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GUEST EDITORIAL

The Rh Factor
Is It Important?

JUST how important is the Rh factor? This is a question that is in the minds of many practitioners of medicine, as well as of many laymen. Since the discovery of the Rh factor in 1940 there has been an ever increasing flood of scientific and pseudo-scientific articles in the medical journals of the world. Because of its tremendous appeal it has been emphasized in many lay journals. Because of this vast amount of literature on the subject, some of it arguing one point, some another, there are many physicians who have not had the opportunity to fully evaluate the pertinent facts known today concerning the Rh factor. As a result many needed transfusions have not been given since the physician feared an Rh transfusion reaction. Many mothers have gone through their pregnancies with great fear because of the dread of giving birth to a baby with hemolytic disease of the newborn.

It is not proposed in this article to answer fully the question of just how important the Rh factor is. That, probably, cannot be done today. However, in the short period of time since the Rh factor was discovered, some very definite and important information has been learned. From this information we can make certain statements which when viewed in their true perspective will point out the importance of the Rh factor in a few conditions.

For example, the Rh factor has been claimed to be the responsible agent in the production of toxemias of pregnancy, accidental hemorrhages of pregnancy, the occasional abortion in an otherwise parous woman, and the death in utero of thousands of stillborn infants. As a matter of fact we know today that the Rh factor is as remote as a causative agent in these conditions as it is in the production of lobar pneumonia.

There are two conditions, however, in which the Rh factor is of prime importance. One of these is the production of certain transfusion reactions, and the other is the production of erythroblastosis fetalis, or as it is more commonly called today, hemolytic disease of the newborn.

In certain individuals a transfusion reaction will result, which may or may not be fatal, if there is an incompatibility between the Rh factor of the donor and that of the recipient. In order for this to occur, the recipient must be one of the 13 per cent of the white population that is Rh negative, and the donor must be one of the 87 per cent of the white population that is Rh positive (in negroes, somewhat under 7 per cent are Rh negative). If the Rh negative recipient is a male, he may be given several transfusions of the Rh positive blood before he will have a reaction, since he must

be repeatedly sensitized to the Rh factor by multiple transfusions of the Rh positive blood, before he will develop enough Rh antibody to hemolyze the Rh positive cells in a subsequent transfusion. If the recipeint is a female however, this may not be so, if she has given birth to several children who are Rh positive, and will not be so if she has delivered an infant with hemolytic disease of the newborn, because she has been repeatedly sensitized by her Rh positive pregnancies. This recipient then may have a fatal transfusion reaction from the first transfusion she receives, rather than after several transfusions as in the male recipient. The importance of this point is obvious. If an Rh negative mother who has Rh antibody in her serum as a result of being sensitized by her Rh positive fetus, should have some obstetrical condition requiring immediate transfusion, that mother could die as a result of the transfusion if she were given Rh positive blood. She would be tabulated as an obstetrical death, whereas in reality she is a transfusion reaction death.

Just as hemolytic disease in the newborn can cause a transfusion reaction in the mother, so transfusions in the mother can cause hemolytic disease in the newborn. The mechanism in the latter is identical with that described for the production of the transfusion reactions save that now the Rh negative mother has been previously sensitized to the Rh factor by having received Rh positive blood at some earlier time in her life. If that individual should then marry an Rh positive man, and she became pregnant with an Rh positive fetus, the red cells of that fetus could be hemolyzed in utero to such an extent that the infant would be born with one of the types of hemolytic disease of the newborn (congenital anemia, icterus gravis or congenital hydrops). It is not necessary that the patient be given Rh positive blood intravenously for this to happen. Cases are on record where mothers were given intramuscular blood during their childhood for prophylaxis against measles, and those same mothers later terminated their first pregnancies with infants suffering from hemolytic disease of the newborn.

That type of case is not common. The usual history in cases where an infant with hemolytic disease is born is that the first one or two pregnancies are normal, and then the subsequent pregnancy resulted in the diseased infant. In these cases the mother is Rh negative and her husband is Rh positive. Since the Rh factor is transmitted as a dominant characteristic the infants from such a mating are usually Rh positive. This mother then has been sensitized to the Rh factor by her previous pregnancies of Rh positive fetuses, and after sufficient sensitization has taken place (usually following one or two pregnancies) the red cells of the next Rh positive fetus are hemolyzed to such a degree that normal erythropoetic activity is not possible, and the infant suffers from hemolytic disease of the newborn. There have been a few cases reported where the mother has had as many as seven normal Rh positive children before the eighth child was born with hemolytic disease.

It would appear from the foregoing that the Rh factor reaches its peak of importance in the pregnant and or parous Rh negative woman. If we are to handle these patients properly it is essential that we know the Rh status of the patient, and also of her husband. Whether the patient has had previous transfusions should be ascertained, and a complete obstetrical history is helpful. During the course of the patient's pregnancy an effort should be made to test her serum at suitable intervals for the development of Rh antibody.

At Rochester, New York, a plan for finding out the above facts has been put into use. It is a cooperative plan between the Rochester Health Bureau and the De-

partment of Obstetrics and Gynecology of the University of Rochester Medical School, and is essentially a plan of doing routine ante-natal Rh and anti-Rh determinations on every pregnant woman. It is carried out briefly, as follows: Every blood sample that is submitted to the Health Bureau in a routine manner for a prenatal Wassermann test, is also tested for the Rh factor. The result of this test is reported to the physician along with the Wassermann report. If the patient is Rh positive nothing further is done except in individual cases. If the patient is Rh negative, however, a form is sent the physician which requests him to obtain a sample of the husband's blood for Rh determination. If the husband is Rh negative nothing further is done. If he is Rh positive, the physician submits a brief obstetrical history of the patient along with a statement as to whether the patient has ever been transfused, and if so whether she had a reaction to one or more of the transfusions. In addition the physician submits samples of the patient's blood at monthly intervals during the first seven months of the pregnancy, every two weeks during the eighth month and every week during the last month. These samples are tested for the development of the Rh antibody, and if it appears during the pregnancy, its titer is determined in each subsequent blood sample to detect a rise or fall in its level.

At the end of the first eight months of operation of this plan several interesting data were obtained. Some of these are recorded in the following table:

Total Deliveries City of Rochester		4,717
Prenatal Rh Tests		5,567
Rh negative tests		690
Positive Tests for Rh Antibodies	20*	1 Case in q. 34 Rh—mothers 1 Case in q. 278 tests.
Infants born with Hemolytic Disease of Newborn	9*	1 Case in 524 Deliveries.
Mortality from Hemolytic Disease of Newborn	6	1 Case in 786 Deliveries.

(All figures are for period from 10/1/45 to 5/1/46.)

Perhaps the most interesting single figure in the table is that which records that only one out of every 34 Rh negative mothers who are married to Rh positive husbands develops Rh antibodies and in turn subsequently delivers an infant with hemolytic disease of the newborn. This should be a very encouraging figure for those Rh negative women who because of widespread lay publicity or of well-intentioned friends are extremely fearful of becoming pregnant or of continuing a pregnancy once it has been unintentionally initiated. These women should also be reminded that it is unusual for the first or second pregnancy to result in an infant with hemolytic disease of the newborn.

The other two figures which are of interest record the frequency of hemolytic disease of the newborn, one case in every 524 fullterm or nearly fullterm deliveries and the mortality rate from hemolytic disease, one case in every 786 fullterm or nearly fullterm deliveries. To the physician doing an average amount of obstetrics these figures indicate that many months or even years might elapse before he would deliver a baby suffering from hemolytic disease. However, from the Public Health viewpoint these figures are of significance. Potter[1] has calculated that in 1943 in the United States approximately 8,000 babies died of the disease. It has been found in Rochester that the disease stands fourth among the fetal causes of infantile mortality.

No one doubts the importance of doing routine ante-natal Wassermann tests.

*The discrepancy between these figures is due to the fact that only about half of the sensitized mothers had delivered at the time this table was composed.

In Rochester during the eight months referred to in the table there were 27 positive ante-natal Wassermanns and nearly as many (20) positive anti Rh tests. No infants were born with congenital syphilis, yet nine were born with hemolytic disease.

In this same study it was found that the single procedure of transfusing infants suffering from hemolytic disease with Rh negative blood would reduce the mortality rate by about 50 per cent. This figure is not as high as has been reported by others, but it serves to illustrate the value of using Rh negative rather than Rh positive blood in the treatment of these infants.

It is felt that routine testing of every pregnant woman for the Rh factor, and subsequently for the Rh antibodies if indicated, should be an established practice. This policy would have a two-fold result. It would in one instance assure the patient that she would deliver a normal infant, as far as hemolytic disease is concerned, and in the other instance it would inform the physician that a defective infant is to be expected and thus enable him to make preparations for the immediate transfusion of the infant at the time of birth with Rh negative blood.

DONALD H. KARIHER, M.D.

BIBLIOGRAPHY

1. Potter, E. L., Am. Jr. Pub. Health **36**:101, 1946.

EDITOR'S NOTE. Dr. Kariher is the Assistant Professor of Obstetrics and Gynecology, University of Rochester School of Medicine and Dentistry, Rochester, New York.

Floral Eponym (41)

ELSHOLTZIA

JOHANN SIGISMUND ELSHOLTZ, 1623-1688

Elsholtz (or Elsholz), physician, botanist and chemist, was born at Frankfurt-on-Oder. He received his M.D. at Padua. Elsholtz was physician to the Elector of Brandenburg and director of the botanical garden which had been created by that Prince. Later he became director of the botanical garden in Berlin. Besides several works on Botany, he was the author of "Anthropometria" or the proportions of the human body (Padua 1654) and a work on dietetics. He also published many secrets on the perfection of wine and directions for preparing vegetable essences. Willdenow gave the name Elsholtzia to a genus of plants in his honor.

Elsholtzia is a genus 20 species of chiefly Asiatic, aromatic under shrubs of the mint family. *E. stauntoni* is grown for its late blooming purple flowers.

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WILLIAM LAWRENCE GATEWOOD, M.D.,*
New York, N. Y.

Although plastic surgery dates back several thousand years, it was only during the first World War that it assumed the status of an accepted specialty. In the years which elapsed between World War I and the recent conflict, plastic and reconstructive surgery progressed with giant strides. Now that we are again experiencing the results of destructive warfare, attention once more centers on this important branch of medicine as a major determinant of effective rehabilitation. The wise and timely application of plastic repair may mean the difference between normal, happy living and a wide range of physical and psychological disorders. The mental reaction, particularly in the hyperesthetic subject, is frequently pronounced—with disturbance of the economic, emotional and social activities of those afflicted.

In dealing with exposed parts, especially the face, surgeons have striven for centuries to obtain a good functional result and, in more recent years, their attention has been given to the effort of including in the result an improvement in the patient's appearance.

Because it is intended that this discussion should include a number of facial disfigurements, it would not be within the scope of this paper to relate in detail a description of any one of them. It is felt that the concise report of cases might best serve to bring to the attention of the reader the importance of the subject.

FACIAL PARALYSIS

Asymmetry of the face, resulting from unilateral involvement of the muscles of the face, due to a seventh nerve paralysis, is strikingly disfiguring because of the mobility of the normal side. In comparison with the lifeless sagging of the paralytic cheek, every motion of the unaffected side is exaggerated into a grotesque grimace. A certain compensatory over-activity of the healthy muscles accentuates the contrast. The twisted mouth and the lagophthalmos are unsightly enough when the face is in repose. However, when every play of expression and every functional movement of the healthy features occur the disfigurement becomes decidedly more pronounced.

When the paralysis is seen in infancy or childhood, another factor enters in to magnify its consequences. Because of disuse, the affected muscles atrophy and the corresponding portion of the face fails to develop. This under-development, contrasted with the normal growth or over-development of the opposite side, noticeably increases the asymmetry.

The condition of the facial muscles should necessarily be a factor in the selection of the type of operative procedure required for the repair. Are these muscles capable of contraction or have they degenerated? In the patient where the paralysis has existed for many years and there is no galvanic response, it is reasonable to suppose that the facial muscles have degenerated. The lesion is an old one and surgical reconstruction, utilizing the temporal muscle and pericranium to lend support to the atrophied facial muscles on the affected side, should serve to lift the corner of the mouth and narrow the palpebral fissure. In making use of the temporal muscle and pericranium in the repair, the weakened muscles are given support on which to brace themselves. Direct nerve suture, grafting or neuro-anastomosis is the method of choice in suitable cases, namely, in those in which it is possible to demonstrate a galvanic response showing that the facial muscles are still contractile. Here every effort must be aimed at supplying the paralyzed, but still contractile, muscles with renewed nervous impulses.

In the case report herein presented, the muscles of the face on the affected side were in a state of atrophy. No response could be had to the galvanic test. It was not a suitable case for surgery of the nerve. Under the circumstances, it was felt that in the use of the method prescribed, while not entirely satisfactory, it would serve to improve the patient's appearance and benefit his morale. As a result of the procedure, the face was made almost symmetric in repose and certain voluntary movements resulted. However, in advising the operation, it was fully realized that the emotional movements would remain lost following any operative procedure and this was thoroughly explained to the patient. The operation resulted in the reinforcement of the muscles of

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the left cheek, the lifting of the paralyzed corner of the mouth and correction of the lagophthalmos which had caused an irritated condition of the left eye. The result seemed to justify the operation though it was extensive and time consuming.

REPORT OF CASE

J. S., a white man, aged 25, has had good health all of his life, with the exception of an acute mastoid infection when two and a half years of age. Because he was deprived of surgical treatment, a degeneration of the facial nerve with subsequent paralysis of the left face resulted (Fig. 1a.). Due

Figure 1.

a. Facial paralysis with lagophthalmos and atrophy of facial muscles, left side.

b. Post-operative result. Can now close left eye and there is some muscular reinforcement of left cheek. Note the semi-horseshoe shaped scar over left malar region in both views. This resulted many years ago from a horse-bite and will be excised at a later date.

to the disfigurement, the patient shunned strangers upon reaching the age of adolescence. Subsequently he suffered spells of mental depression when he would shut himself away from his family. He refused an education and accepted work in the kitchen of a poorly lighted restaurant where his contacts were few. His physician stated that he feared a true psychosis might develop unless some improvement in the patient's appearance could be had and urged that something be done in the way of plastic repair even though the condition could be only slightly benefited.

OPERATIVE PROCEDURE

This consisted of the use of a strip of pericranium, about 4 x 12 centimeters, which was suspended from the temporal region to the corner of the mouth and sutured to the orbicularis oris muscle and to the fascia overlying the atrophied muscles of the cheek. A small strip of the anterior fibers of the temporal muscle and temporal fascia was brought down and placed under the skin of the upper eyelid and made secure by suturing it to the periosteum of the inner and outer rims of the orbit. Deep mattress sutures of alloy steel wire No. 36 were placed in the fascia overlying the orbicularis oris and levator labii superioris muscles to draw up the relaxed tissues of the face. The redundant skin in the pre-auricular region was excised. The wound edges were approximated with fine silk and a snug dressing secured the parts in their new position (Fig. 1b).

COMMENT

Since the function of the facial nerve was long absent in this patient, and a surgical repair of that structure was not feasible, the procedure advocated and followed presents a justifiable choice in the effort to improve the symmetry of function. The desirability of surgical repair should be measured by the degree of improvement. Insignificant as it may be, it is better than a continuance of the tragic pre-operative condition.

THE MALFORMED EAR

The abnormally protruding ear is the bane of masculine vanity. Unlike most deformities, it provokes mirth rather than compassion. Fortunately, women can at times conceal the obtrusive appendage beneath their hair, while men must either seek surgical repair or go through life wincing at the friendly jests of their fellows. Slight protrusions of parts of the auricle can sometimes be corrected in infancy and early childhood by proper care in placing the child in its crib and carriage. The ear should be kept flat against the head. Where there is marked protrusion of the entire ear or partial prolapse sufficient to warrant plastic reconstruction, the deformity is not infrequently of an hereditary nature, and does not yield to such mild palliatives as caps and adhesive straps. In this type of deformity, the purpose of reparative surgery is to bring the ear closer to the skull and produce an auricle that conforms to the normal outline.

REPORT OF CASES

R. C., a white boy, aged 14, with marked prolapse of the upper three-fourths of the left auricle has been extremely conscious of the disfigurement for the past several years (Fig. 2a). According to

his mother he has undergone genuine mental anguish because of this conspicuous flaw in his appearance.

Figure 2.
a. Pre-operative partial prolapse of left ear. b. Demonstrates post-operative result.

Surgical Reconstruction

The necessary surgical repair consisted in the removal of a quantity of skin and cartilage through an incision concealed behind the ear. Normal outline of the auricle was obtained when the resistance of the remaining cartilage was reduced by the removal of certain portions of it. After modeling the ear into the desired shape, stay sutures of wire were employed to maintain the parts in their reassembled position until complete healing had taken place (Fig. 2b).

V. B., a girl of 17, with bilateral protrusion of the ears, was reported by her guardian not to have been greatly concerned about the disfigurement until the past two years (Fig. 3a). Because of the desire

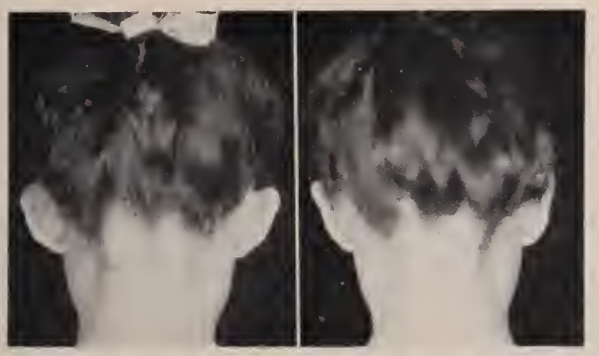

Figure 3.
a. Protrusion of ears, bilateral. b. Operative result.

to have a boyish haircut, prior to spending the summer at the beach, she earnestly requested an operation.

Surgical Reconstruction

Through an incision, about 1 inch in length, in the postauricular region, the skin with the perichondrium was elevated for a distance of about a half inch lateral to each side of the incision. Through this incision, strips of the cartilage were incised and some of them removed. In those that were not removed, incisions were made in them to reduce the resistance of the cartilage so that proper moulding could take place. Fine silk sutures in the perichondrium and skin closed the wound. A gauze dressing, confined with adhesive, completed the procedure (Fig. 3b).

Relaxation of Muscles of Face and Neck With Redundancy of Overlying Skin

This condition is occasionally seen in the third decade of life. It commonly occurs in the middle

Figure 4.
a. Relaxed tissues of face and neck. b. Demonstrates its correction.

aged and those in advanced years. Adequate appraisal of the social and economic status of the patient should materially assist the surgeon in establishing the necessity for the surgical correction of the condition.

Case Report

K. K., a white woman, aged 44, with marked relaxation of the muscles and skin of the face and neck, was referred by her physician who stated that she had a definite complex because of the deep lines and folds in her face and neck and he recommended plastic repair for the condition (Fig. 4a).

Operation

Through an incision in the pre- and post-auricular regions, the skin overlying the cheek and neck was undermined. All bleeding points were controlled by ligation and the use of the electrosurgical unit. Mattress sutures of wire were placed in the

fascia and external muscle fibers for the purpose of lifting these structures. The redundant skin was excised and the wound edges were coapted with fine silk. A like procedure was carried out on the companion side. A firm dressing was applied (Fig. 4b).

COMMENT

The lifting of the muscles of the face and neck with excision of redundant overlying skin is becoming an economic necessity with business women who are having the operation done to enable them to keep their positions a few years longer. When the correction is executed with thoroughness of technique, the result remains satisfactory for many years.

RHINOPHYMA WITH BONY HYPERTROPHY

The usual treatment for rhinophyma or acne hypertrophica is the complete excision of the hypertrophied skin and underlying growth. In the case herewith presented (Fig. 5a), a different approach was used in that only a small quantity of skin was excised.

PROCEDURE

Through an inverted T-shaped skin incision at the tip of the nose, the underlying diseased structures were removed, exposing the upper and lower lateral cartilages. The skin flaps were trimmed to conform to the cartilaginous outline and the wound edges were approximated with dermalon. The bony hypertrophy of the dorsum of the nose was reduced with a chisel and a lateral osteotomy was performed for the purpose of narrowing the nose (Fig. 5b).

COMMENT

Rhinophyma or acne hypertrophica is a disease of the skin of the nose which requires surgical treatment.

CONTRACTED SCAR OF LOWER EYELID, NOSE AND CHEEK (Fig. 6a)

The necessary repair consisted in excision of the scar tissue and application of a sheet of intermedi-

Figure 5.
a. Rhinophyma with bony hypertrophy and marked bulbous tip.
b. Post-operative view.

Figure 6.
a. Contracted scar of lower eyelid, nose and cheek.
b. Showing result after application of skin graft.

Figure 7.
a. Profile view before operation showing elongated and bulbous nose with depression in lower dorsum.
b. Profile view after operation. Note improvement of contour of lip at junction with columella by cartilage graft.
c. Full view before operation. Bulbous tip with abnormally wide bridge.
d. Full view after operation. Nose narrowed and shortened with filling in of depression.

ate skin after the technique of Jenney's modification of the Sano procedure (Fig. 6b).

DISTORTIONS OF THE NOSE

The central position of the nose on the face, with its pronounced protrusion adds to the conspicuousness of any deformity associated with it. A gross nasal malformation is often a real source of concern to many who are so afflicted. To patients with a normal mentality and a rational conception of the extent of their disfigurement, the importance of having such a defect corrected is paramount.

Figure 8.
a. Over-sized deformity of nose. b. Post-operative view.

Deformities of the nose comprise a high percentage of disfigurements of the face and they frequently require operations of an inherently individual nature for their correction. Each case will often present a new problem and must be dealt with accordingly (Figures 7 to 10 inclusive).

CONCLUSION

Today there is a definite realization of the psychic aberrations which interfere with the social usefulness of a number of people who have a congenital or acquired disfigurement of the face. A defect that is prominent enough to injure the social or economic future of an individual warrants surgical intervention. The many unfortunates who are frustrated in their search for happiness and security because of these disfigurements are entitled to the proper advice and surgical treatment provided their physical condition will justify it.

Figure 9.
a. Old fracture of nose with complete nasal obstruction. b. Pre-operative lateral view. c. Correction of deformity with relief of nasal obstruction. d. Profile post-operatively.

Figure 10.
a. Lateral view showing deep depression in cartilaginous dorsum of nose following operation of septum several years ago. b. Post-operative result.

BIBLIOGRAPHY

Coleman, Claude C.: Surgical Lesions of the Facial Nerve with Comments on Its Anatomy, *Archives of Surgery*, May, 1944, Vol. 119, No. V.

Jenney, John A.: A Modification of the Plasma Fixation Method (Sano) of Skin Grafting by the Use of Bobbinet and a Mirror Attachment, *American Journal of Surgery*, January, 1945.

Maliniac, J. W.: Sculpture in the Living, Romaine and Pierson, 1934.

Sheehan, J. Eastman: Tissue Grafting, *American Journal of Surgery*, September, 1943, Vol. LXI, 339-349.

Gatewood, W. L.: Correction of Multiple Deformities of Nose, *Virginia Medical Monthly*, Vol. 71, 227-231, May, 1944.

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SOME PRECAUTIONS IN THE ADMINISTRATION OF SULFA DRUGS*

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Without attempting to give the historical background of the sulfonamides and their therapeutic value, which is well established, because of a fairly good number of cases in which dangerous complications have been observed following the incorrect administration of these agents, it is felt advisable to review some of these complications and the methods of administration, to keep these complications at a minimal level.

Of course, in the susceptible individual, unfortunate reactions will occur regardless of the drug and/or the method of administration; these cases are comparatively few. It is customary to evaluate the good therapeutic results obtained in the administration of sulfonamides with very little thought of the dangers and complications of its administration. Such complications as agranulocytosis, hemolytic anemia and toxic hepatitis and hematuria with crystalluria are quite well known to the profession. With the now quite universal use of penicillin, relatively less use of the sulfonamides has followed, with consequent decrease in expected complications. However, it seems that many doctors with their busy practices are apt to overlook the fact that sulfonamides should never be administered without adequate doses of sodium bicarbonate, in such quantities as to render the urine alkaline in reaction. It is well known that when a sulfonamide is excreted by the kidney, if the urine is acid in reaction, a precipitation of crystals will occur. In the presence of an alkaline urine, these crystals are usually rapidly dissolved. Certainly, in the administration of the sulfonamides, frequent urinalyses to determine the presence or absence of crystals, and also a fairly frequent blood count and hemoglobin estimation should be done, if we are to treat conditions in which the sulfonamides are indicated.

A summary of a few interesting cases that I have seen in which sulfonamides have been improperly administered, with resulting complications, are listed:

(1) White male, age 45: Complaint: Severe pain in left lumbar and bladder regions, marked hematuria. He had been given sulfathiazole, four grams daily, for about thirty days, without any alkali, and had not taken much water because of nausea. Gross masses of crystals were present in the urine. Cystoscopic examination showed multiple lacerations in the bladder mucosa. Patient was referred to urologist, and it was found necessary to remove the left kidney and ureter, and patient was given several blood transfusions before recovery.

(2) Baby, female, 5 months: Given sulfathiazole without soda for five days for pneumonia; when admitted to the hospital, a marked anemia, with one million red blood cells, hemoglobin 30 per cent, white blood cells, 3,200, was found. Blood transfusions, elixir cofron, etc., were given, but patient did not react and death followed three days later. In this case, death might have been prevented if it had been possible to have done a blood count and stopped the drug earlier.

(3) White male, age 25: Complaint: Bloody urine. He had been taking two sulfathiazole tablets bought at a drug store, without soda, every four hours for five days, and stated that he was told to drink little water. Prompt recovery following intravenous fluids and alkalies.

(4) White male, age 22: Complaint: Gonorrhea. Had had sulfathiazole, one gram doses every four hours without alkali for four days; pains in upper back and bloody urine, which showed RBC 3 plus, and sulfonamide crystals, 2 plus; hematuria improved rapidly after administration of sodium bicarbonate and ingestion of large amounts of water. He was given penicillin in oil for gonorrhea, which did not recur.

(5) White male, age 47: Acute hemolytic anemia, with toxic hepatitis, caused by sulfadiazine. Admitted to hospital with diagnosis of pneumonia, lobar, left lower lobe. He received 2.5 grams sodium sulfadiazine intravenously every three hours for first day, followed by oral sulfadiazine, 1 gram every four hours, day and night, with 10 grams of sodium bicarbonate with each dose. The drug level in the blood was high, but temperature remained

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101 F. On the fourth day, hemoglobin had dropped to 78 per cent, from 92 per cent on admission, and leucocyte count was 13,500. Drug was reduced to five grains every four hours and hemoglobin was 69 per cent, and leucocyte count 19,000 on 6th day. The next day, temperature was 102.5°, and definite icterus was present. Leucocyte count rose to 30,000. Blood sulfadiazine level remained at 7.5 mgms. On the 9th day, hemoglobin had dropped to 59 per cent; RBC 2,226,000, and leucocyte count 25,500. It was clear that a severe hemolytic anemia with toxic hepatitis had developed, preceded by a sharp rise in leucocytes. Five transfusions of citrated blood were given without reaction; high caloric diet, thiamine chloride and liver extract were begun. The course was stormy for several days, but improvement began in one week, and temperature became normal on 19th hospital day. The blood picture improved gradually, and patient was discharged on 36th day. A slight anemia remained, but icterus had cleared and liver edge was no longer palpable.

Synergic Action of Penicillin and Sulfonamides

Clinical and experimental tests have demonstrated the synergic action of sulfonamides and penicillin. In a concentration of penicillin which is not inhibitory to staphylococcus, the addition of sulfathiazole renders it bactericidal. Therefore, in some severe types of infections, which do not respond to either sulfonamides or penicillin, a combination of the two may bring about prompt improvement. By this means, it is possible to use smaller doses of sulfonamides for a shorter time, thus lessening the danger of serious complications.

If, in the course of administration of a sulfonamide, agranulocytosis develops, it has been found that penicillin is the most effective agent in treatment.

White woman, age 19, had received sulfathiazole for severe vaginal discharge of post delivery. One week, post partum, phlebitis developed in right leg, and a few days later, left leg. Sulfathiazole was administered, four grams daily for three weeks; her temperature suddenly rose to 105°; sulfanilamide was substituted. Pronounced anemia, leucopenia and granulocytopenia were discovered. A transfusion of whole blood was given. Pelvic examination showed a foul smelling bloody discharge. Penicillin was administered for eight days, for a total of 800,000 units. The white count rose to 13,800, and many primitive granulocytes were found in the stained smear. The leucocyte count was 46,800 three days later, and eventually rose to 84,800. Primitive granulocytes were present in large numbers, and an occasional nucleated red cell was noted. Leucocyte count gradually declined and she showed continuous clinical improvement. Two weeks later the WBC was 10,400, and she was clinically well. In this case, the bone marrow reaction to sulfonamides was total, since there was anemia, leukopenia and thrombo-cytopenia.

Death from agranulocytosis is not due to lack of granulocytes *per se,* but to overwhelming sepsis, which results when granulocytes disappear. This is why penicillin is indicated and effective when this condition develops, during or following the administration of sulfonamides.

Toxic Manifestations

The subject of drug toxicity concerns all of the sulfonamides because of their close chemical relationship, and because they tend to follow a similar pattern in toxic effects. The longer the drugs are administered, the greater is the likelihood of encountering trouble, and therefore treatment of meningitis offers a greater hazard from this standpoint than do other less severe infections. The various effects of the sulfonamides are too familiar to all to warrant a systematic recital at this time, but there are some points of importance in connection with them which should be emphasized.

In the first place, practically all toxic effects can be detected by observation alone. Symptoms such as headache, nausea with vomiting, dizziness and anorexia are, of course, self-evident. Abnormalities of fluid balance may be noted easily and even bloody urine frequently may be detected by inspection of a gross specimen. Drug fever, rashes, anemia and jaundice all may be easily observed.

Leukopenia and granulocytopenia alone can be detected only by laboratory examination. They tend to occur most commonly with sulfapyridine and also with sulfanilamide, and may occur during or after the second week of treatment. Acute anemia may occur during the first few days of treatment. It occurs most commonly with sulfanilamide and also with sulfapyridine. Both of these conditions, as well as jaundice produced by the drug, are ordinarily indications for discontinuing sulfonamide treatment, but in meningitis, sulfonamides are usually essential rather than optional,

and, when a rash occurs, a change should be made to another sulfonamide, instead of discontinuing sulfonamide treatment. We have frequently seen rashes and fever from sulfathiazole rapidly disappear when administration of this drug was discontinued and replaced by sulfadiazine.

Renal complications form a real hazard with use of sulfonamides and occur most frequently with sulfathiazole and sulfapyridine, but may occur with sulfadiazine and sulfamerazine. As all of the drugs are practically entirely eliminated in the urine, maintenance of an intake of fluid of 3,000 cc. or more and output of at least 1,500 cc. following this procedure oliguria readily becomes evident, and the margin of safety is greater than if a low intake and excretion of fluid are maintained. If renal complications do occur, they can frequently be successfully combated by ureteral catheterization, if this is necessary.

A real contribution in reducing renal complications has been made by Gilligan and associates in demonstrating the increased solubility of sulfonamides in a neutral or slightly alkaline urine. Sulfadiazine is twenty times more soluble and acetylsulfadiazine thirty times more soluble with a pH of 7.5 than a pH of 5.0. At neutrality, or a pH of 7.0, sulfadiazine is seven times more soluble, and acetylsulfadiazine thirteen times more soluble than with a pH of 5.0-6.0. These figures indicate a reason for the occurrence of toxic renal complications, and also indicate the value of alkalization therapy. Clinical experience has demonstrated that adjuvant alkali therapy will markedly reduce the occurrence of renal complications when sulfadiazine is used. Gilligan and associates have suggested from their studies that it is necessary for satisfactory results to give an initial dose of 6 grams (90 grains) of soda bicarbonate, followed by 15.6 grams (234 grains) daily divided into 2.6 grams (39 grains) doses given at intervals of four hours. They have suggested that this amount of alkali be given to patients receiving as little as 3 to 4 grams (45 to 60 grains) of sulfadiazine daily. For patients receiving 12 to 15 grams (180 to 225 grains) of sulfadiazine daily, they suggested that 19.5 grams (292½ grains) of soda bicarbonate to be given daily in equally divided doses at intervals of four hours.

Actually, these doses of soda bicarbonate have produced no ill effects from alkalosis and in consideration of the high percentage of renal complications occurring, large amounts may be roughly checked by using litmus or nitrazine paper which turns blue in neutral or alkaline urine. Alkaline therapy is also of value, as Schwartz and his associates have shown, when sulfathiazole is used, but its value is not as great as when used with sulfadiazine. It is of no value when used with sulfapyridine, because of the poor solubility behavior of this drug and its acetyl derivative, but should prove to be of even greater value when used with sulfamerazine than when used with sulfadiazine. It also seems likely, as Loughlin and associates have noted, that adjuvant alkali treatment with sulfadiazine may cause the level of the drug to rise more rapidly in the blood.

How We Can Avoid the Renal Complications of Sulfadiazine Therapy

Six patients were in the Rhode Island Hospital at one time with various degrees of oliguria or anuria, during or following sulfadiazine therapy. Autopsy findings in the two patients who died of anuria showed the presence of tubular necrosis due to sulfadiazine, and one had massive precipitation of acetyl sulfadiazine in the renal tubules. The other four patients recovered after the drug was stopped and fluids were forced by the oral or intravenous routes.

Serious renal complications may be anticipated when sulfadiazine is administered to a patient with potentially reduced kidney function, if the drug is given without adequate precautions. First consideration is the age of the patient. As old age approaches, the kidney has little excretory parenchyma to spare, although its total function may still be perfect. The age of fifty has been arbitrarily chosen as a convenient point at which renal weakness, as regards sulfonamide therapy, may be said to begin; actually the individual patient must be studied for evidence of actual renal damage. The drug should be used with great care, if at all, in the presence of definite nephritis.

Sulfadiazine is absorbed and excreted more slowly than most other sulfonamides. It is detoxified in the body by acetylation, and the excretion, almost entirely by the kidney, is about 70 per cent free drug, and 30 per cent acetylate. After stopping the drug, it is excreted in 48 to 72 hours by a normal kidney; perhaps in many days by a damaged kidney. The amount of drug in the blood when equilibrium is reached on any particular dosage

varies widely in patients. After one gram every four hours for at least three days, the amount of free sulfadiazine 3½ to 4 hours after a dose may be as high as 17 mg. per 100 cc. of blood, or as low as 2 mg. per 100 cc.

The following rules have been adopted to govern the use of sulfadiazine at the Rhode Island Hospital to prevent kidney or other untoward complications:

(1) Do not use sulfadiazine unless it is definitely needed.

(2) Do not give a large initial dose to dehydrated patients, or to those with cardiac decompensation, or with a history of kidney damage.

(3) Treat dehydration with intravenous fluids before starting the drug.

(4) Watch urine pH, and 24 hour volume and color carefully. Use alkalies to raise a low pH, fluids to increase low 24 hour volume, and examine any red or brown urines for hemoglobin and cells.

(5) $NaHCO_3$ up to 10 grams, with each dose of sulfadiazine, should be given to all patients without cardiac decompensation or edema.

(6) When edema or cardiac decompensation is present, $KHCO_3$, not over 10 grams per day, should be used instead of $NaHCO_3$. If the patient is getting digitalis, the $KHCO_3$ should be limited to 5 grams per day.

(7) When no oral therapy is possible, sodium sulfadiazine administered intravenously supplies the sodium, and unless otherwise indicated, sodium lactate should not be given.

(8) An initial blood count need be checked only after a week, unless otherwise indicated. The blood dyscrasias develop after 7 to 10 days of treatment. If white cell count falls from normal to less than 3,000, the drug should be stopped.

(9) Ammonium chloride therapy for relief of edema and $NaHCO_3$ for alkalinization are incompatible. $KHCO_3$ will do both of these jobs.

(10) Urine pH should be done as a bedside procedure on all cases. This is a simple matter with nitrazine paper or Fisher alkaline-acid test.

(11) Determination of the amounts of free and acetylated drug in the blood should be done after the first 24 hours and about every 2 days.

(12) Water by mouth and sugar solutions by vein are the best treatment for anuria, if it develops. Should these fail, plasma or concentrated plasma should be tried. Other aids of special use are concentrated sodium chloride solutions by vein, diathermy to the kidney, transfusions, or even decapsulation of the kidney.

In our experience, oral administration of nicotinic acid, vitamin C, etc., have seemed to lessen nausea in some cases, but have not seemed to alter complications if and when present. Likewise, fruit juices seem to decrease nausea in some cases but do not seem to lessen renal and other complications.

It would naturally be assumed that such preparations as succynl, sulfathiazole, phthalysulfathiazole, etc., which are little absorbed, would have fewer reactions than the usually administered sulfonamides.

SUMMARY

Complications following the administration of sulfonamides, especially when given without adequate doses of alkali and abundant fluid intake are apparently on the increase, judging from the number of complicated cases being seen lately. The sulfonamides are a valuable and potent therapeutic agent when properly administered in conjunction with adequate alkalies and abundant fluids. However, a careful clinical and laboratory check-up is necessary if unwanted complications are to be avoided. The writer prefers sulfathiazole to any other form, except in meningitis, where sulfadiazine is the preferable drug. In pre-operative preparation for colonic surgery, phthalysulfathiazole has been found very satisfactory, and no reactions have been encountered in its use.

THE IMPORTANCE OF CEREBROSPINAL FLUID EXAMINATION IN SYPHILIS*

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During the past few months, following a review of patient records in the Newport News Venereal Disease Clinic, an obligatory consideration in the handling of syphilis cases has been recalled to our attention with emphasis. The point in question is one already known, and brings to mind the academic fundamentals drilled into our heads during medical school lectures. Nevertheless, it is a fact of sufficient importance to be brought back into focus from time to time, lest we forget—to the great detriment to some of our patients.

The question here considered is the absolute necessity for examination of the cerebrospinal fluid. This should be a routine part of our diagnostic and treatment control procedures, to be absolutely insisted upon in the handling of every case of syphilis.

Until about twenty months ago, cerebrospinal fluid examinations were not routinely made on syphilis cases in the Newport News City Clinic. When these examinations were started, there was an enormous back-log of records to be considered. Because of the time element, and because of lack of sufficient personnel and laboratory facilities, it could not be hoped that all these patients could be tested in a short time. We were obliged to select the cases to be examined. There were many patients who had been under treatment for a long time, whose diagnoses were "latent syphilis", and who (under routine procedures) were ready, or almost ready, to be probated from treatment as "cured", "arrested", or "Wassermann-fast". It is in this group that most of the cerebrospinal fluid examinations have been made. There is now a fixed rule of the clinic that antisyphilitic treatment not be interrupted nor terminated before this examination has been completed. Another rule adhered to is that no patient can be presumed "cured", and allowed to stop treatment as such, until the blood serologic test for syphilis has become negative and remained so for at least one year. During this year, treatment must be regular, and the serologic test is repeated every eight to ten weeks.

When treatment has progressed to the point where its termination may be considered, the necessity for lumbar tap is explained to these patients, and the examination made. A number of these cases, considered as latent syphilitics—on the basis of lack of symptoms and negative physical findings—were found to have definite involvement of the central nervous system. Since the Kolmer test on these fluids is the only specific test of those made, we are considering in this discussion as positive only those fluids on which the Kolmer quantitative test has shown some degree of definite positivity.

The spinal fluid quantitive Kolmer and blood serology in the last 100 cases having cerebrospinal fluid examination are summarized in the accompanying chart. It is noteworthy that prior to this examination all but one of these cases had been classified as "latent syphilis" because of absolute lack of symptoms and physical signs to suggest the involvement of any vital organ or system.

SEROLOGIC AND CEREBROSPINAL FLUID FINDINGS IN THE LAST 100 CASES EXAMINED IN THE NEWPORT NEWS CITY CLINIC

1. Spinal Fluid Positive; Blood Serologic Test Negative	6
2. Spinal Fluid Positive; Blood Serologic Test Doubtful	1
3. Spinal Fluid Positive; Blood Serologic Test Positive	4
4. Spinal Fluid Negative; Blood Serologic Test Negative	38
5. Spinal Fluid Negative; Blood Serologic Test Doubtful	16
6. Spinal Fluid Negative; Blood Serologic Test Positive	35
7. TOTAL OF SERIES CONSIDERED	100

It is to be noted that of these 100 cases, 44 had negative blood serologic tests for syphilis, and 17 had doubtful serologic reports. In the 44 cases with negative serologic tests, there were six which had positive cerebrospinal fluid. One of the 17 cases with doubtful serology had positive cerebrospinal fluid. Had this involvement of the central nervous system not been detected, serious results probably would have been encountered after treatment had been routinely stopped following a year of serologic negativity. It is this type of case which will so often needlessly develop symptoms and signs of propressive and destructive neurosyphilis—sometimes years after treatment has been terminated.

*From a paper presented to the Warwick County Medical Society, November 13, 1945.

Of course, while the possibility of the existence of neurosyphilis in sero-negative syphilitics is constantly kept in mind, the uncovering of six such cases in 44 (13.6 per cent) emphasized to us the importance of cerebrospinal fluid examination in all cases of syphilis.

We feel that Stokes, in his forceful and to-the-point" style, has expressed in a way which cannot be improved the importance of *spinal fluid examination in all syphilitics.* In his text, Modern Clinical Syphilology, he has made the following points which should never be lost to mind: This examination is of absolutely fundamental importance in the diagnosis of syphilis, as a check on treatment control, and as a necessary test before deciding on the question of terminating treatment. Positive spinal fluid findings—frequently of a marked degree—usually precede by long intervals the first signs and symptoms of central nervous system involvement. Since the examination of spinal fluid may reveal the only evidence of an asymptomatic neurosyphilis, it should be a routine and obligatory part of the management of all cases of syphilis. A quotation from this text gives emphasis to the point here made:

"There can no longer be any reasonable question of the fact that the cerebrospinal fluid in latent syphilis may present absolutely the only evidence of the disease, the Wassermann reaction on the blood being persistently negative, * * * and functional impairment of the nervous system not having proceeded to the point where any neurologic evidence of the disease can be identified."

When a patient enters a clinic or a physician's office for the purpose of receiving antisyphilitic treatment, the physician in charge of the case assumes responsibility—not only for the patient's immediate complaint, but for the future course of the disease—insofar as he is able to control the infection. To deprive the patient of special treatment methods indicated in neurosyphilis because of ignorance of its presence is to shirk this responsibility. There have been many cases of central nervous system syphilis which have progressed to a degree of deterioration beyond the help of medical ability, because treatment—perhaps years before—had been stopped and the patient considered cured without having received the benefit of a spinal fluid examination. This examination would have revealed the existence of the neurosyphilis, and the treatment would have been directed against this serious involvement instead of being terminated. Knowledge of the existence of neurosyphilis, in the asymptomatic stage and often with serologic negativity, is of the utmost importance in order to prevent many late debilitating and fatal consequences.

CONCLUSION

The importance of cerebrospinal fluid examination as an integral part of the management of every case of syphilis cannot be over-emphasized. By this comparatively simple procedure, many needless late serious effects of the disease can be avoided. Neurosyphilis can and does occur in the absence of symptoms and physical signs when the blood serologic test is persistently negative.

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PULMONARY ACTINOMYCOSIS DUE TO ACTINOMYCES ASTEROIDES*

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and
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According to Topley and Wilson[1] in infections due to the aerobic species of the genus *Actinomyces,* either the acid-fast or non-acid-fast type may be the causative agent. We wish to report a case of actinomycosis of the lung with involvement of right buttock and left pleura from which *Actinomyces asteroides,* an aerobic, feebly acid-fast variety, was isolated from the pleural fluid and draining sinuses.

This actinomycete was first isolated and described by Eppinger[2] in 1891 from a brain abscess in a glass-grinder. Pseudotubercles were noticed in the lung and pleura, as well as in old calcified abscesses in the bronchial and supraclavicular glands. The disease was called pseudotuberculosis cladothrichica and the organism, *Cladothrix asteroides.* In 1902, MacCallum[3] reported a case of peritonitis in a negro child due to *Actinomyces asteroides.* Claypole[4] in 1913 first showed this organism to possess feeble acid-fast properties. Data on 26 cases due to an acid-fast actinomycete were collected from the literature by Henrici and Gardner,[5] in 1921. An aerobic, acid-fast species of actinomycete was reported by Goldworthy in 1937[6] in Australia as the causative agent in a case of pulmonary actinomycosis with metastatic spread of the infection to the extent that generalization had apparently occurred one month before death. He pointed out that the physical signs of tuberculous infections of the lung are similar to those of the pulmonary actinomycosis, except that tuberculosis is more common in the upper lobes, whereas, with actinomycosis the lower lobes more often become involved. He also considered differential diagnosis to be difficult without bacteriologic aid. Carter in 1937[7] expressed the opinion that radiologic examination fails to give any definite help in diagnosis, except when atypical radiograms of lungs suspected to be tuberculous promote decisive bacteriologic investigation. Kessel in 1938[8,9] isolated *Actinomyces asteroides* from the lung of a patient exhibiting symptoms of both meningitis and pneumonia. The strain was pathogenic for a number of common laboratory animals, killing them as a rule within a week. Drake and Henrici[10] reported in 1943 that this actinomycete has little invasive power for rabbits and guinea pigs and that all attempts to produce a progressive disease similar to tuberculosis failed. They were able to induce a specific allergic state in rabbits and guinea pigs against *Actinomyces asteroides* with regularity by the intratesticular infection of mineral oil suspensions of live organisms. This allergic state was demonstrated by skin tests with crude extracts of unheated organisms or with purified protein or polysaccharide fractions.

An aerobic non-acid-fast actinomycete, *Actinomyces graminis* (Bostroem), was isolated by Holt[11] in 1941 and in 1946 from brain abscesses in the left parietal lobe. Lynch and Holt[12] in 1944 reported the finding again of this species of aerobic non-acid-fast actinomycete in the case of a pulmonary actinomycosis involving the upper lobe of the lung, with invasion of the pericardium, subacute adhesive pericarditis, chronic myocarditis, and left empyema. The localization of the infection in the left upper lobe was in contrast to the findings of Goldsworthy, as above reported.

CASE REPORT

History: E. J., a 34 year old white woman, was referred to the Medical College of Virginia Hospital on August 28, 1943, by Dr. B. B. Bagby, Jr.‡ She had lost 25 pounds in weight over a twelve month period and had suffered some weakness and anorexia. In the Spring of 1943 she developed a hacking, non-productive cough and pain in her left chest. These symptoms increased in severity, and her cough became productive of purulent sputum with an occasional small hemoptysis. A film of her chest was made in May, 1943, and a minimal infiltrative lesion was noted in both infraclavicular areas with a small amount of fluid at the left base (Fig. 1).

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†Deceased.
‡This clinical report was obtained through the courtesy of Dr. B. B. Bagby, Jr., Medical Director, Pine Camp Hospital, Richmond, Virginia.

The diagnosis of bilateral pulmonary tuberculosis was made, and she was admitted to Pine Camp Hospital in June, 1943. She was acutely ill and, clinically, she was much sicker than one would expect from the extent of her pulmonary disease. The

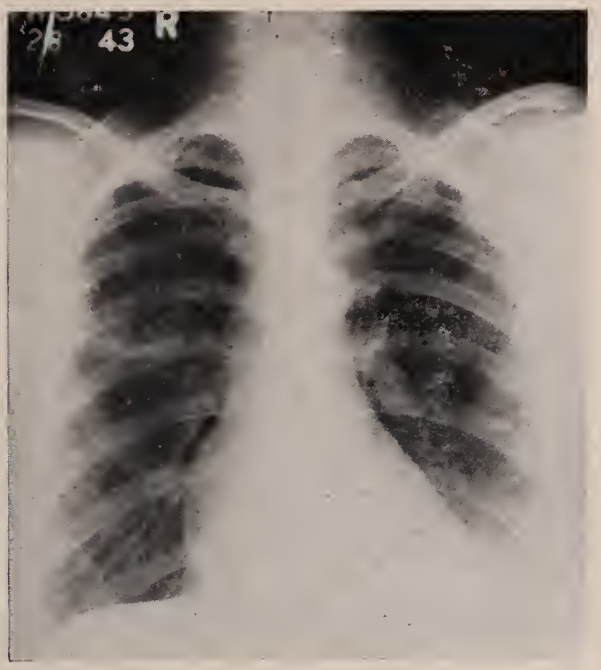

Fig. 1.

only abnormal physical signs were those of a small effusion at the left base. W.B.C. was 28,000 with 77 per cent polys and 23 per cent lymphs. During the latter part of July, because of the severe pleuritic pain on the left, serous pleural fluid was aspirated and replaced with a small amount of air. Examination of the pleural fluid and sputum failed to reveal tubercle bacilli. The presence of Gram positive filaments resembling actinomycetes was demonstrated in smear preparation stained by Gram's method by us in this pleural fluid. In August she developed an abscess over her right buttock that was incised and drained. Actinomycetes were also found by us in the pus of the abscess. She was then transferred to the Medical College of Virginia Hospital.

Physical Examination: Temperature, 101°; pulse, 100; respiration, 34; blood pressure, 120/80. Admission examination revealed a well developed and well nourished white woman, appearing critically ill and in obvious respiratory distress. She was moderately cyanotic. Signs of pneumothorax were present over the left thorax, and there was moderate displacement of the heart and trachea to the right. On the medial aspect of the right buttock was a two centimeter incision with a small amount of brownish purulent discharge. Chest film (Fig. 2) revealed a large left pneumothorax with heart and mediastinum markedly displaced to the right; there was a small amount of pleural fluid on the left. Films of cervical and thoracic spine and of the pelvis revealed no abnormalities of the bony structure.

Laboratory Examinations: Urinalysis was essentially negative. R.B.C., 3.6; Hbg, 49 per cent; W.B.C. 18,050; polys, 74 per cent; lymphs, 20 per cent; monos, 5 per cent; basophils, 1 per cent. Blood chemistry: sugar, 84; N.P.N., 30 mgm. per cent. Blood culture: negative. Examinations of sputum for tubercle bacilli and for actinomyces were repeatedly negative.

Hospital Course: Patient remained acutely ill and severely dyspneic despite frequent aspirations of air from the left pleural space. The pressure within the pneumothorax space remained around 8-12 centimeters of water above atmospheric pressure, and it was obvious that a "tension" pneumo-

Fig. 2.

thorax was present. Temperature remained between 101° and 102°. On September 4, 1943, she appeared worse and examination of her chest revealed an increase in pleural fluid, which was confirmed by chest film. A diagnostic aspiration revealed

thick, cream colored pus that had an extremely foul odor. Many feebly acid-fast and Gram positive filaments were found on direct smear and were identified by cultural means as *Actinomyces asteroides*. Surgical drainage of the empyema was instituted. Three centimeters of the 8th rib in the anterior axillary line were removed; a large rubber tube was inserted and closed drainage was instituted. Following the rib resection, there was definite improvement clinically with remarkable relief of her dyspnea. However, her temperature continued elevated to 100°. Potassium iodide and thymol were given by mouth without any significant effect on her general

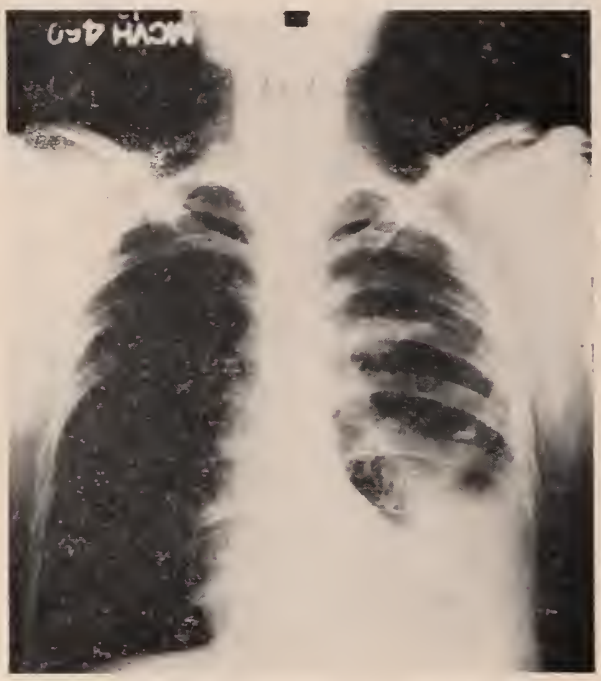

Fig. 3.

condition or on the amount of empyema drainage with the patient's temperature remaining between 99° and 100°. She suffered anorexia and loss of weight (approximately twenty pounds over a period of one month). She remained anemic and it was necessary to give her blood transfusions every three or four days to keep her hemoglobin above 60 per cent of normal. Because of her failure to improve, penicillin was begun on October 13, 1943, and 50,000 units were administered daily by continuous intravenous drip for ten days. A larger dose was impossible because at the time the supply of available penicillin was quite limited. Before penicillin was begun, she developed an infection in her left breast that suppurated and was drained surgically on October 16, 1943. Following penicillin therapy the drainage from the pleural space, as well as that from the breast abscess, gradually decreased, but did not cease until about two months later. Actinomyces disappeared from the empyema drainage, and repeated examinations thereafter failed to reveal this organism. Clinically, she improved slowly over this same period, but she continued to run a low grade temperature elevation (99°-100°), and on November 26, 1943, because of this fever, she was given sulfadiazine by mouth. Her temperature returned to normal on sulfadiazine and, clinically, it was felt that she improved more rapidly while taking this drug. She gradually became ambulatory and was discharged to a convalescent home on December 9, 1943. Chest film (Fig. 3) at time of discharge revealed that the lung had completely re-expanded with residual pleural thickening and probably a small amount of fluid.

She continued to improve and was able to return to work in May, 1944, as a seamstress. She continued apparently well until November, 1944, when serosanguineous material again drained from her right buttock. The sinus tract was outlined with lipiodol and then excised. It was found not to involve the bone. Histological examination of the sinus revealed non-specific granulation tissue. She was again discharged, apparently well.

In March, 1945, she developed severe pain in her lower left chest, a swelling over the same area in the posterior axillary line, and a cough productive of bloody, foul smelling sputum. The abscess (empyema necessitatis) ruptured spontaneously and drained on March 27, 1945. About 300 c.c. of green pus, mixed with blood, were evacuated. Examination of sputum and empyema fluid revealed actinomycetes. The chest film following this drainage revealed a pyopneumothorax. A catheter was introduced into the empyema pocket to promote drainage. In addition she was given penicillin, 15,000 units every three hours for two weeks. After a few weeks the empyema space was obliterated.

Because of recurrent attacks of biliary colic, she was re-admitted to the hospital on July 2, 1945. Cholecystogram revealed a non-functioning gallbladder. It was also found that she had an ulceration of the cervix, a biopsy of which revealed a squamous cell carcinoma, grade 2. She received x-ray therapy to the pelvic organs for a total of 9,000

roentgen units.

On August 3, 1945, she developed moderate severe pain in her left lower abdomen and a mass was outlined in the same region that was thought to be inflammatory. Exploration revealed a large, apparently inflammatory mass involving the sigmoid and upper part of the rectum. This mass was removed and the pathological diagnosis was "probably endometriosis, with no evidence of actinomycetes found".

In September, 1945, a cholecystectomy was done and the gall-bladder was found to be the seat of a chronic and subacute inflammatory process with approximately twenty irregular faceted stones. Penicil-

Fig. 4.

lin was again given intramuscularly following this operation and a total of 8,000,000 units was administered over a seven week period (20,000 units every three hours). The reason for the large total dosage of penicillin was that the reports in the current literature indicated that such dosage was necessary for adequate "cure" of actinomycotic infection.

She was discharged asymptomatic and without clinical evidence of actinomycosis in December, 1945. Chest film prior to discharge (Fig. 4) revealed a thickened pleura on the left with no apparent residual empyema.

Bacteriologic Examinations: Actinomyces asteroides isolated from this case possessed the following characteristics:

Morphology. Pleomorphism and metachromatism pronounced. In culture (Fig. 5) appears as small

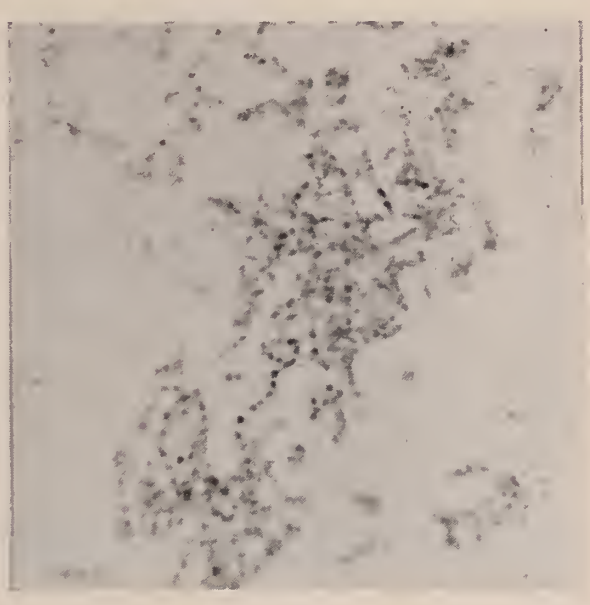

Fig. 5.—Smear preparation stained by Gram's method showing marked metachromatism and pleomorphism of *Actinomyces asteroides* from a crushed colony. X1440.

granular and solid rods, long granular rods and solid and granular segmented filaments, sometimes branching. In tissue and fluids, no *Drusen* form as with anaerobic species. Instead (Fig. 6), pleo-

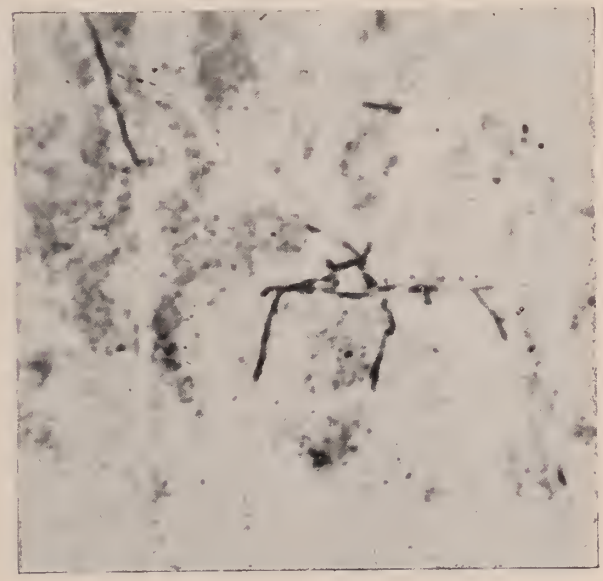

Fig. 6.—Smear preparation of pleural fluid stained by Gram's method showing pleomorphic forms of *Actinomyces asteroides* varying from coccoid and shorter granular rods through the metachromatic branching filaments. X1440.

morphic forms varying from the small granular rods through the shorter and longer, solid and granular filaments are seen. The branching granular inter-

Fig. 7.—Smear preparation stained by Gram's method showing felted granular mycelium with branching of *Actinomyces asteroides* in pleural fluid. No radical granules or *Drusen* seen. X1440.

lacing forms are most frequently seen in tissues and fluids (Fig. 7). *Tinctorial Property:* Gram positive. Feebly acid-fast when first isolated. Acid-fast

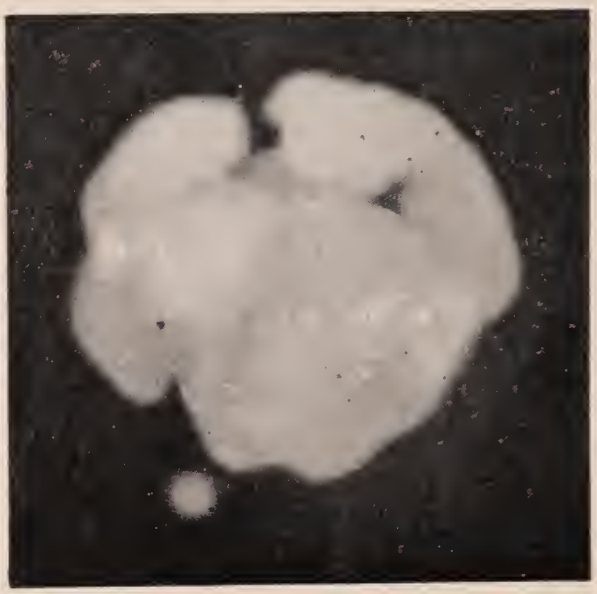

Fig. 8.—Colony of *Actinomyces asteroides* cultivated in semi-solid dextrose brain infusion agar showing a "cauliflower" appearance. X25.

property tends to disappear under cultivation. *Motility:* Non-motile.

Biological Properties: Aerobic. Growth somewhat inhibited anaerobically. Small granular rods resembling diphtheroids seen after prolonged anaerobic cultivation and in older aerobic cultures. Grows on ordinary culture media at 20° C.-37° C. in 48 to 72 hours.

Veal Infusion Blood Agar. Surface colony formation occurs within 24 to 48 hours. Early colony appears as raised, dry or wrinkled with an opaque to whitish center and a moist glistening, more translucent periphery. Later the center of the colony

Fig. 9.—Section showing an actinomycotic abscess on outer surface of liver of mouse. X180.

becomes ochre or yellowish-orange in color with less translucent margin, sometimes mycelioid.

Semi-Solid Dextrose Brain Infusion Agar. Uniform white opaque surface growth occurs early. Ball-like colony soon forms which after several weeks deepens in color and differentiates itself into a "cauliflower" appearance (Fig. 8) to us, although

a "star-shaped" appearance is the descriptive term commonly used.

Dextrose Broth. Early white surface growth, which is deposited at intervals. Older deep growth acquires ochre color. No turbidity.

Loeffler's Blood Serum. Colony formation similar to that seen on blood agar streak plates.

Gelatin. Grows very poorly and slowly. No liquefaction.

Milk. Early surface growth white, later appearing ochre in color. No change, or slightly alkaline.

Chopped Meat. Growth inhibited under anaerobic conditions.

Brewer's Medium. Growth very poor on surface. No deep growth.

Carbohydrate Semi-Solid Infusion Agar. No fermentation after four weeks on dextrose, lactose, saccharose, maltose, mannite, xylose, dulcite, dextrin, sorbitol, levulose, arabinose, or inosite. Early surface growth white; later colonies show a yellowish-orange color, scant deep growth.

Pathogenic Properties: A mouse was injected intraperitoneally with 0.5 c.c. saline suspension of a young culture of this actinomycete and sacrificed in less than two weeks. On the outer surface of the liver a small, walled-off abscess was found (Fig 9). Under low power, one gained the impression of a nodule produced by "ray fungi". However, closer study revealed an abscess with well defined felted and granular mycelium, sometimes branching.

COMMENTS

An interesting feature of this case of actinomycosis is that the patient remained apparently well for eleven months after her initial course of treatment. The infection must have remained dormant in the pleural cavity over this period of time. This suggests the necessity of a follow-up period of several years before the final results of the different therapeutic measures can be accurately evaluated.

In the case reported, the clinical impression was that her initial recovery was influenced more by sulfadiazine therapy than by the relatively small dosage of penicillin (500,000 units). We believe that the dosage of penicillin used initially in this case was entirely inadequate and that a total of 5-10 million units is advisable with the maximum dosage indicated in pulmonary lesions. Whether to give the penicillin in large doses and over a short period of time (e.g. 14 days) or whether to prolong the treatment over a period of 6-12 weeks by using smaller doses is debatable at the present time. McCrea, Steven and Williams[13] recommend that the penicillin be given over a period of 14 days with doses of 80,000 every three hours. A prolonged period of treatment with smaller individual doses has been advocated by Walker and Hamilton.[14]

It is to be emphasized that adequate surgical drainage of all suppurative lesions remains the basis of the treatment of actinomycosis. Instillation of penicillin into the pleural space is not recommended in cases of empyema, except as an adjunct to surgical drainage.

Dobson and Cutting[15] have shown that in vitro there is considerable variation in the susceptibility of the different strains of actinomycetes to penicillin and sulfadiazine which makes for further difficulty in evaluating therapeutic results. The same authors showed that in vitro, unless high concentrations of penicillin are used, the drug appears slightly inferior to sulfadiazine and that the combination of the two drugs in the usual dosage does not improve the results.

The Nomenclature and Classification of the Actinomycetes: The authors[16] feel that the general clinical term actinomycosis should be retained for all disease in man or animal due to any member of the family *Actinomycetaceae* Buchanan. Our views are based on the opinion that too much confusion has been inserted already into the literature by those whose aims are to satisfy both the clinician and the taxonomist. However, we agree with Waksman and Henrici[17] upon the need of differentiating more satisfactorily for the taxonomist and bacteriologist, those members of the family *Actinomycetaceae,* in a manner that will comply with both the microbiological and botanical codes and the taxonomic data. Their nomenclature and classification of the actinomycetes published in 1943 seems to us to be useful. They present a classification which retains the morphological subdivisions made by Waksman in 1940[18] and applies certain subdivision names. Of interest in connection with this paper, he gives the generic name of *Nocardia* Trevisan to those actinomycetes belonging to the family *Actinomycetaceae* Buchanan and producing true mycelium which in vegetative forms fragment into bacillary or coccoid elements and which are aerobic partially acid-fast or non-acid-fast. The other member of this family which is anaerobic or microaerophilic, parasitic and non-

acid-fast is given the generic name of *Actinomyces* Harz. We predict that the nocardiosis will assume recognition for the disease produced by the aerobic forms, although we discourage its acceptance. For this reason and to avoid further confusion in the literature especially for the clinician, we have retained the term actinomycosis and the genus *Actinomyces*. MacCallum[3] as early as 1902 expressed the belief that the genus should be called *Actinomyces* instead of *Cladothrix* or *Streptothrix*.

SUMMARY

1. A case of pulmonary actinomycosis that simulated pulmonary tuberculosis in the early clinical course is reported.

2. An apparent "cure" results from surgical drainage of empyema and soft tissue abscesses followed by penicillin therapy.

3. A large total dosage (5-10 million units) of penicillin is recommended in the chemotherapy of actinomycosis with adequate surgical drainage of all suppurative lesions.

4. *Actinomyces asteroides* isolated is an aerobic, feebly acid-fast actinomycete. The tinctorial, morphological, cultural and pathological characteristics are described.

5. Bacteriologic studies are necessary in differential diagnosis. The routine smear preparation of sputum, pleural fluid and pus from abscesses in buttock made earlier treatment possible. It is suggested that both aerobic and anaerobic cultures should be made of all suspected actinomycotic material and that the presence of *Mycobacterium tuberculosis* be ruled out.

BIBLIOGRAPHY

1. Topley, W. W. C., and Wilson, S. S.: The Principles of Bacteriology and Immunity; 2nd Ed. 273, 1936.
2. Eppinger, H.: Uber eine neue pathogene Cladothrix und eine durch sie herbogerufene Pseudotuberkulose. *Beitr. z. path. Anat. u. z. allg. Path.* **9**: 387, 1891.
3. MacCallum, W. G.: On the Life History of *Actinomyces asteroides*. *Centralbl. f. Bakteriol,* **31**:529, 1902.
4. Claypole, E. J.: On the Classification of Streptothrices, Particularly in Their Relation to Bacteria. *J. Exp. Med.* **17**:99, 1913.
5. Henrici, A. T., and Gardner, E. L.: The Acid-Fast Actinomycetes, with a Report of a Case from Which a New Species Was Isolated. *J. Infec. Dis.* **28**: 232, 1921.
6. Goldsworthy, N. E.: Pulmonary Actinomycosis Caused by an Acid-Fast Species of Actinomyces. *J. Path. and Bact.* **45**:17, 1937.
7. Carter, R. A.: Pulmonary Mycotic Infections. *Radiology* **26**:551, 1936.
8. Kessel, John F., and Goolden, E. Burwell: A Comparison of Strains of Actinomyces Recovered from Human Lesions. *Am. J. Trop. Med.* **18**:689, 1938.
9. Kessel, John F.: Personal Communication; February 16, 1942.
10. Drake, Charles H., and Henrici, Arthur T.: *Nocardia asteroides;* Its Pathogenicity and Allergic Properties. *Am. Rev. of Tuberculosis* **48**:184, 1943.
11. Holt, Rebecca A.: Unreported Cases, 1941 and 1946.
12. Lynch, John P., and Holt, Rebecca A.: Pulmonary Actinomycosis Due to *Actinomyces graminis*. *Annals of Internal Med.* **23**:91, 1945.
13. McCrea, J. H., Steven, R. A., and Williams, O. O.: Actinomycotic Infection of Soft Tissue of the Neck; Apparent Cure Following Large Dose of Penicillin. *J. Lab. and Clin. Med.* **6**:509, 1945.
14. Walker, John M., and Hamilton, Joseph W.: The Treatment of Actinomycosis with Penicillin. *Am. Surg.* **121**:373, 1945.
15. Dobson, Leonard, and Cutting, Windsor, C.: Penicillin and Sulfonamides in the Therapy of Actinomycosis. *J.A.M.A.,* July 21, 1945.
16. Shaw, Frederick W., and Holt, Rebecca A.: Unpublished report.
17. Waksman, Selman A., and Henrici, Arthur T.: The Nomenclature and Classification of the Actinomycetes. *J. Bact.* **46**:337, 1943.
18. Waksman, Selman A.: On the Classification of Actinomycetes. *J. Bact.* **39**:549, 1940.

USE OF DEFIBRINATED HUMAN BLOOD FOR CULTURING THE TUBERCLE BACILLUS*

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Blood has been used more or less successfully for many years in the cultivation of the tubercle bacillus and we claim no originality for the method or technique. However, we believe it is worthwhile to report our results in a comparative study of 231 consecutive cases of microscopically negative sputa, cultured on the standard media for culture of the tubercle bacillus, such as Lowenstein, Petragnani, Miraglia, and also in defibrinated blood.

Our routine for the examination of sputum is as follows:

The study of three stained smears made directly from the sputum on separate days.

If the first smear is negative, we dehydrate the two other specimens in the incubator for a day or two in order to concentrate them. These are mixed with a few drops of distilled water and smears are made in the usual way.

If these are negative, a twenty-four hour specimen is collected, concentrated and examined.

Having failed to find tubercle bacilli in these specimens by prolonged and careful microscopic examination, culture work is done on the following specimens of sputum. We use the conventional media mentioned above regularly for this work, and for the last twenty months have used defibrinated blood as well.

The efficiency of the recovery of tubercle bacilli from cultures when working with contaminated material—and sputum is contaminated—depends essentially upon the destruction of the secondary bacteria by the acids. It is imperative that the sputum be thoroughly homogenized; that the material to be examined be inserted carefully in the bottom of the centrifuge tube and not smeared on the inside walls of the tube. The acids—oxalic 5 per cent or sulphuric 6 per cent—must be thoroughly mixed with the sputum or the culture will be contaminated and lost. A contaminated culture may represent a lost positive sputum.

We prefer the 50 c.c. centrifuge tubes with constricted lip. The pipette is carefully inserted into the bottom of the tube and 2 c.c. of specimen allowed to run into the bottom. Two c.c. of acid is then allowed to run down the side of the centrifuge tube, with the pipette inserted about half-way down. With a whirling motion the acid forms a thin coating on the inside of the tube. The sputum and acid are then mixed by rotation a few times every five minutes or so for a half hour. The tube is then almost filled with sterile saline, mixed and centrifuged one hour at high speed. The supernatant fluid is poured off and 1 to 1½ c.c. sterile saline is mixed with the sediment with a sterile glass-drawn pipette and bulb. This is inoculated on four tubes of each standard culture medium, or 12 cultures in all. In some cases this is repeated two or three times. The same procedure is used with the defibrinated blood cultures, except that no saline is added to the sediment before inoculating the culture. Instead, defibrinated blood is added directly to the specimen, after the secondaries have been destroyed and the acid removed as in the first step described above. The blood is thoroughly mixed with the specimen by drawing in and out of the pipette a few times. We also scrape the bottom of the tube with the pipette, in order to break the sediment away from the bottom to form a homogenized mixture.

In many laboratories the centrifuge capacity is only 15 c.c.; however, the same technique is used, but instead of 2 c.c. of sputum and acid respectively, 1 c.c. of each is used for the smaller centrifuge tubes. We have used with good results 15 drops of sputum and 15 drops of acid, carefully dropping this with a sterile glass-drawn pipette in the bottom of the tube without smearing the inside walls. We prefer a round bottom tube, because the pointed standard 15 c.c. centrifuge tube is not favorable to the thorough mixing of the sputum and acid that is so essential in this work.

The cultures are incubated for 6-7 weeks, and smears are made and stained in the usual way. As mentioned previously, the method and technique,

*This work was done at Catawba Sanatorium Laboratory by the author and his staff.

though modified slightly, are the accumulated results of other investigators, and are stated here for convenience only. This study was undertaken merely in an effort to determine the efficiency of defibrinated blood as a medium for culture of microscopically negative sputum for the tubercle bacillus. During a period of 20 months, 231 consecutive microscopically negative sputum specimens from admitted patients were examined by the standard method and by the defibrinated blood method, with the following results:

Microscopically negative sputum, positive on human defibrinated blood—20.93 per cent.

Microscopically negative sputum positive on standard media—33.72 per cent, or, 12.79 per cent more positive results with the standard media than with the defibrinated blood culture.

The disadvantages in the use of the whole blood are:

1. The growths cannot be seen in the culture medium and smears must be made and examined.

2. There are 12.79 per cent fewer positives than on the standard media.

The advantages are:

1. It is a simple culture method which will pick up 20.93 per cent positives in microscopically negative sputa which would be missed when no culture method is used.

2. It can be used when the standard method is impractical.

National Health Bill Proposal Dies in Senate Committee.

Commenting editorially on the report that efforts to obtain enactment of the National Health bill at this session of Congress have been abandoned by the Senate Committee on Education and Labor, the July 20 issue of *The Journal of the American Medical Association* says:

However, proponents of the bill assert that it will be introduced at the next Congress when it convenes in January. According to unnamed "persons close to the program," the "Wagner-Murray-Dingell bill was loaded with too much controversy for its sponsors to expect it to reach a voting stage before the election year adjournment begins." This statement from the *New York Times* should be pleasing to the medical profession of the United States, the vast majority of whom have indicated again and again their opposition to the kind of regimentation of medicine embodied in the Wagner-Murray-Dingell legislation. Incidentally, the *New York Times* says that among the witnesses asked not to appear at the hearings on the bill were representatives of organizations vigorously opposed to the legislation.

As we go to press, the following announcement has also just come from the Committee on Education and Labor:

The Education and Labor Committee voted to instruct Senators Pepper and Taft to draw up a resolution embodying the recommendations of the Committee relative to child health. These recommendations would express the sense of the Committee that a total increase of $31,500,000 for child welfare authorizations should be provided. On July 15 Senators Pepper and Taft introduced Senate Joint Resolution No. 177, amending title 5 of the Social Security Act, to provide for increasing grants to the states for crippled children, maternal and child health and child welfare.

This resolution will go now to the finance committee of the Senate for consideration and then to the appropriations committee of the House for its consideration. In case of favorable action, which at this time seems doubtful, the administration of these additional funds will be under the same regulations and controls as previous appropriations for the Children's Bureau.

By action of the United States Senate, President Truman's reorganization plan becomes effective so that the Children's Bureau will be transferred from the Department of Labor to the Federal Security Agency, where its activities will be coordinated with those of the United States Public Health Service and other governmental agencies having similar functions.

SURGICAL LESIONS OF THE GREATER OMENTUM

E. M. FUSCO, M.D.,
Grundy, Virginia.

The greater omentum, though a useful abdominal adornment, is seldom considered as a primary site of surgical disease. Though it is often the secondary recipient of metastatic deposits and inflammatory processes, it is seldom if ever the primary donor of abdominal lesions.

It is my pleasure to report three cases in which the greater omentum was the seat of disease requiring surgical treatment. Two of the cases—volvulus of the omentum—were not diagnosed prior to operation. The third case—thrombosis of the omental artery—was diagnosed correctly.

Case 1: W. M., a white male adult of 45 years, was brought to the hospital complaining of pain in the R. L. Q. of 24 hours' duration. His temperature was 101 and he was vomiting. The white blood count was 24,000 and the abdomen was exquisitely tender over McBurney's area. Rebound tenderness was present. He did not appear shocked and there was no previous history of gastric dyspepsia. The blood pressure was 140/82 and the urine was negative. No masses were felt on abdominal examination.

A diagnosis of acute appendicitis was made. The abdomen was opened under GOE through a McBurney incision. An orange-sized, dark mass immediately presented itself. It was recognized immediately as omentum. The incision was enlarged and the mass delivered. It was then seen to be a volvulus of the greater omentum with a pedicle attached to the colon. The mass was easily resected by ligating the pedicle. Convalescence uneventful.

Case 2: J. O., a white female adult of 43 years, was brought to the hospital complaining of pain in the R. U. Q. of about 36 hours' duration. The pain was acute and accompanied by vomiting. There was no previous history of abdominal disease. She was very obese and no masses were felt. There was a slight icteric tint to the skin. The white blood count was 22,000. She was not in shock but appeared seriously ill. Our diagnosis was acute cholecystitis with probable empyema of the gall-bladder. The temperature on admission was 101. We elected conservative treatment for two days in which time fluids were urged. The patient did not improve, however, and on the third day her temperature was 102 and she was exquisitely tender over the gall-bladder area. No masses were felt.

Surgery was then elected over a tentative diagnosis of empyema of the gall-bladder. The abdomen was entered through an upper right rectus incision under spinal anesthesia. A large, black, grapefruit-sized mass immediately presented itself which was not attached and was sharply demarcated and smooth in appearance.

The mass was delivered easily and detached itself from its pedicle. No ligatures were necessary. It was then seen to be a ball of the greater omentum with a pedicle attached to the stomach and colon. The liver, stomach, and gall-bladder were entirely normal. There was a pronounced twist in the base of the omentum which substantiated the diagnosis of volvulus of the greater omentum. Convalescence was very stormy, and intensive supportive treatment was necessary. The complications which occurred were paralytic ileus and atelectasis. Recovery.

Case 3: A. H., a fragile white woman of 75 years, is the prize case of our series. She had been under treatment for years for hypertensive arteriosclerotic heart disease with auricular fibrillation. Two weeks before admission she fell and suffered a Colles' fracture of the left hand and numerous bruises and contusions. The fracture was reduced under local anesthesia and the patient allowed to return home. While at home she refused to leave her bed, saying she felt too bad. On the night of admission she suffered a sudden, sharp pain in the left lower quadrant and was brought to the Grundy hospital. She rocked from side to side in the bed moaning pitifully. There was exquisite tenderness in the left lower abdomen limited to that area. A mass was felt in the left lower quadrant and the patient being cadaveric in appearance, it was easily seen as a mild bulging.

She was submitted to surgery under local anesthesia with a tentative diagnosis of embolism involving the greater omentum and possibly the coeliac axis. The anesthesia was supplemented by 5 cc. of intocostrin and ¼ grain of morphine. A lower rectus splitting incision was used. The mass pre-

sented itself immediately, was dark in appearance, and was at once identified as greater omentum. About three-fourths of the greater omentum was resected under clamp and ligature and while ligating the base of the mass, the omental branch of the left gastro-epiploic artery was seen to be thrombosed. The thrombus was easily followed by sense of touch to the tip of the spleen. It was necessary to resect more of the omentum as far as the gastro-splenic ligament. No other organs were involved in this mass. Convalescence was uneventful and the patient was discharged on the twelfth post-operative day. The final diagnosis was thrombosis of the left omental branch of the gastro-epiploic artery with segmental gangrene of the greater omentum.

CONCLUSION

Three cases are presented, two of volvulus of the greater omentum, and one of segmental gangrene due to thrombosis of the omental artery. Diagnosis was missed on the first two cases and made on the third. In the third case we felt thrombosis was more probable than embolism because of the trauma experienced but of course this is problematical in view of the fibrillation. The presence of an exquisitely tender mass with a sudden onset and vomiting seem to be the chief diagnostic criteria.

The Washington Institute of Medicine

Is this year observing its fifteenth anniversary.

Founded in Washington in 1931 as a membership association devoted to medical bibliographical research, the Institute utilizes the facilities of the Army Medical Library, largest medical library in the world. Its staff has achieved world-wide recognition for its research on numerous special projects conducted not only for its members, but for many medical and scientic organizations, some of them of international calibre.

Today, however, the Institute makes its greatest contribution to medical progress by means of its unusual Quarterly Review publications, which have achieved world-wide recognition. In these journals, the results of the Institute's comprehensive program of library research are made available to the entire medical profession.

Each of these quarterlies covers one specialized field of medicine, and is edited by a large board of authorities in that field, who provide authoritative abstracts and thoughtful commentaries on all noteworthy advances published in the medical literature of the entire world.

The oldest of the group, the Quarterly Review of Obstetrics and Gynecology, was first published in 1936 (under the name, "Obstetrics-Gynecology Survey"). This was soon followed by Quarterly Reviews covering other specialized fields, including Othorhinolaryngology and Broncho-Esophagology; Surgery; Medicine; Ophthalmology; Pediatrics; and Urology. A ninth quarterly, General Practice Clinics, reviews advances in the fourteen special fields of greatest concern to the general practitioner. Additional Quarterly Reviews in other special fields are being planned for appearance in the near future.

Penicillin Salve for Eye Infection.

Penicillin ointment is the most effective drug ever used for treating chronic inflammation of the eyelids and their membranous lining, according to Capt. Samuel H. Stein, Medical Corps, Army of the United States.

Captain Stein, writing in the current issue of the *Archives of Ophthalmology,* which is published by the American Medical Association, states that, judging from the results obtained after treating 25 patients with this ointment, it "is more effective than drugs formerly used" in the treatment of this condition since it gives rapid relief from symptoms and clears the infection.

Only two cases failed to respond to this treatment, therefore the author suggests that these might not have been due to an infection but rather to an allergy. The staphylococci, which also are responsible for boils, were the infectious agents in this series of cases.

THE FORUM

A Heat Resistant Albumin.

Boiling urine must have been one of the first methods to detect albumin. If it remains clear and no coagulation, albumin is not present. If it clouds, the cloud, if due to phosphates, will disappear when dilute acetic acid is added, though it will remain when due to albumin.

Within the last few years, however, I have found three types of albumin that would neither cloud nor coagulate by boiling alone, yet, by adding dilute acetic acid to the urine which was still as clear as "spring water", despite boiling for a long period, a quick cloud and coagulate would then rapidly form and the precipitate would half fill the test tube.

Of the urines of three patients included in this report, one had a large inoperable tumor which was attached to her one and only kidney. The second had a large inoperable tumor which was a recurrence of an ovarian tumor after twenty-five years. It was inoperable chiefly because she refused operation over a period of three years. The third was a case of "tumors" which fortunately proved to be twin boys. The first and second cases died, but number three lived.

The diagnostic significance appeared to point to intra-abdominal pressure.

A. B. GRUBB, M.D.,
Cripple Creek, Virginia.

Virginia Study of Child Health Services.

After the process of organization was completed, the purpose of the Study and its set-up were presented to twenty-five different Medical Societies at their May and June meetings by pediatricians in various sections of the State.

As a result, out of 2,107 questionnaires sent to physicians in private practice, approximately 30 per cent have been filled in and returned. About the same percentage has been completed by pediatricians who were asked to record their medical visits for a period of four weeks.

Nearly half of the general hospitals have been surveyed and half of the nursing homes have completed their forms. Of the Community Health Services 49 of the 51 organized county Health Departments, 44 of the 49 counties without organized Health Departments and 11 of the 12 cities with organized Health Departments have completed their questionnaires.

If anyone reading this item has not filled in his questionnaire will he do so at his earliest convenience? Each person's contribution is of importance in this Study.

Progress and Increased Activities of Virginia Cancer Foundation.

The Virginia Cancer Foundation and the State Department of Public Welfare are working in close cooperation in an effort to improve the diagnosis and treatment of medically indigent cancer patients in every section of the State.

The State Department of Public Welfare has taken over responsibility for certification and referral of all indigent patients cared for at the expense of the Virginia Cancer Foundation, which is the Virginia affiliate of the American Cancer Society.

Doctors, health officers and nurses, local captains of the Virginia Cancer Foundation, and members of the families of cancer patients are now referring to local welfare superintendents all requests for the care of cases with known or suspected cancer coming under the program of the Foundation.

Dr. George Cooper, Jr., University of Virginia radiologist, who is chairman of the Cancer Committee of the Medical Society of Virginia and also director of the Virginia Cancer Foundation, points out that as a result of this new cooperative program there is no reason why any cancer sufferer within the state should lack for prompt and efficient diagnosis and treatment because of medical indigence. At the same time, this program should not interfere in any way with relationships between any doctor and his private patients.

The Virginia Cancer Foundation began six years ago providing treatments for medically indigent cancer sufferers. Only 36 patients were cared for during that first year. So greatly has this program of patient diagnosis and treatment expanded that an average of more than two patients a day were given attention during the first six months of 1946.

Under the new cooperative program, when a cancer case is referred to a local welfare superin-

tendent, she investigates and must certify as to eligibility for treatment as medically indigent before requesting a clinic appointment from Mrs. Augusta Jarman, executive secretary of the Virginia Cancer Foundation, whose office is in the University of Virginia Hospital, in Charlottesville.

Diagnosis and treatment may be provided at any one of eleven clinics certificated by the Cancer Committee of the Medical Society of Viriginia. Clinics are already being conducted in Charlottesville, Clifton Forge, Hampton, Lynchburg, Newport News, Norfolk, Richmond and Roanoke, at addresses given at the end of this article. Clinics in Alexandria and Danville are to be opened during the autumn.

An appointment for the patient is arranged at the most convenient one of these clinics by Mrs. Jarman, who sends notice of the appointment to the welfare superintendent. The tumor clinic is also notified to expect the patient. If the patient needs transportation to the clinic, this is arranged by the welfare superintendent. Occasionally a patient will go directly to the clinic without his doctors knowledge. Sometimes cancer is discovered after a patient has been admitted to a hospital for another complaint. When this happens, the Virginia Cancer Foundation requests certification of medical indigence from the local welfare superintendent.

After examining the patient, the clinic director sends his medical history back to the University of Virginia headquarters where it is reviewed by the director of the Virginia Cancer Foundation, Dr. Cooper.

When the patient's treatment has been completed, and he has been discharged, a summary of the case is recorded in the office at Charlottesville. Each of the tumor clinics also sends monthly reports of patients seen for check-ups. If the name of a patient scheduled for a clinic check-up is not on the report, a letter is sent to the clinic director asking if he wants the case followed. If the director makes an affirmative reply, a letter is sent directly from the Charlottesville office to the patient. Should the patient continue to remain away from the clinic, and his name not appear on the next monthly check-up report, more positive steps are taken.

From the headquarters in Charlottesville a form in triplicate is sent to Miss Mary I. Mastin, director of the Bureau of Health Nursing, who sends these to the public health nurse nearest the patient with a request for a home visit. After making the visit the public health nurse fills in all three forms, keeps one and sends the other two to Miss Mastin, who, in turn, sends the original to Charlottesville while keeping the other for the records of the newly established Bureau of Cancer Control in the State Department of Health. Should the patient be unable to return for the clinic check-up because of lack of transportation, the Cancer Foundation can ask the help of the Welfare Department in making the needed arrangements.

This follow-up system has been in operation for nearly two years, and has been the means of returning many cases for periodic rechecks. Patients cannot always be trusted to return to the clinics voluntarily, and insisting on regular check-ups the Cancer Foundation has brought about the diagnosis and treatment of many recurrences of cancer.

There's been an added outcome of these home visits and investigations of nurses and welfare workers, who have all too often found other situations in which help was needed. This close co-operation between the Department of Public Welfare and the Virginia Cancer Foundation is not only making early diagnosis and skillful treatment of cancer more readily available to the medically indigent, but is doing a great deal toward the general improvement of the health of the people of Virginia.

The nine tumor clinics now in operation are as follows:

Elizabeth Buxton Tumor Clinic, Dr. M. B. Beecroft, Director, Elizabeth Buxton Hospital, Newport News, Virginia.

Chesapeake & Ohio Tumor Clinic, Dr. J. M. Emmett, Director, Chesapeake & Ohio Hospital, Clifton Forge, Virginia.

Diagnostic Tumor Clinic, Dr. Lomax Gwathmey, Director, Kings Daughters Clinic Bldg., 306 West York Street, Norfolk, Virginia.

Dixie Hospital Tumor Clinic, Dr. Albert A. Creecy, Director, Dixie Hospital, Hampton, Virginia.

Jefferson Hospital Tumor Clinic, Dr. Alfred P. Jones, Director, 1301-1321 Franklin Road, Roanoke 16, Virginia.

Lynchburg Tumor Clinic, Dr. Joseph Houck and Dr. John Devine, Jr., Co-Directors, Outpatient Dept., Lynchburg General Hospital, Lynchburg, Virginia.

McIntire Tumor Clinic, Dr. William H. Parker, Director, University of Virginia Hospital, Charlottesville, Virginia.

Medical College of Virginia Tumor Clinic, Dr. George Zur Williams, Director, Dr. Arthur B. Gathright, Jr., Assistant Director, Medical College of Virginia, 1200 East Broad Street, Richmond 19, Virginia.

Petersburg Tumor Clinic, Dr. Edith I. Miller, Director, Medical Arts Building, Petersburg, Virginia.

The Training of the Graduate Nurse.

To the Editor:

I wish to submit the enclosed article in response to the Guest Editorial by Doctors Carrington Williams and Harry J. Warthen, which appeared in the July issue of the VIRGINIA MEDICAL MONTHLY.

I am submitting my own personal opinions (although I am certain they are shared by many members of the nursing profession) and I do not represent any organization or group of nurses.

I would appreciate any consideration you might give in the publication of the enclosed article. If it should be considered for publication, I wish to request that no change be made in the content without my permission.

ALDA L. DITCHFIELD, R.N., B.S.
Director of Nursing, Riverside Hospital, Newport News, Virginia.

July 18, 1946.

THE EDUCATION OF NURSES

What are some of the duties and responsibilities graduate nurses are called upon to assume in small as well as in large hospitals? Following are but a very few.

1. Basic procedures such as baths, bed making, temperature, pulse and respiration, enemas, etc.
2. Gastic lavage and gavage.
3. Intravenous, intramuscular therapy.
4. Physiotherapy, hydrotherapy, occupational therapy, etc.
5. Taking blood pressures and assisting with or doing all types of diagnostic tests.
6. Administration of medications of all kinds.
7. Recognition of signs and symptoms of a variety of conditions; symptoms of approaching eclampsia in the pre-natal patient, symptoms indicative of brain tumor, symptoms of internal hemorrhage, and many other signs and symptoms of conditions which, if observed early and reported intelligently to the doctor, may save the life of a patient.
8. Administration of anesthesia.
9. During the shortage of doctors she has stood by and held retractors and actually assisted with major operations.
10. Insertion of Levine tubes for Wangensteen suction. Collection and assembly of equipment for complex, complicated treatments which the doctor must administer.
11. Relieve the anesthetist, the pharmacist, and frequently the laboratory technician, the switchboard operator, the housekeeper, the dietitian, yes, and even the maids, the porters, the maintenance man, the plumber, the electrician and the superintendent of the hospital.

What makes the nurse of today so versatile, so indispensable to the physician! Is it the inadequate type of training of thirty or even fifteen years ago that Doctors Williams and Warthen want us to go back to, or is it the fact that our nurses have had a good sound scientific background of knowledge, developed over a very full three year period? (Many of our private duty nurses today, who graduated in the "old days", must call on our young nurses to teach them principles of new procedures which, if they knew the basic principles of Microbiology, Chemistry, and Physics, could do very well without help.)

I say, if doctors continue to make demands on the nurse in the future, as they have done in the past, we will need four, yes, perhaps five years, in order to get everything into the curriculum that will develop the kind of nurse the modern doctor needs, and in most instances wants, as his co-worker.

The basic problems in nursing, today, are not due to the "over-training" of nurses, but are due to the following things, if I may mention but a few:

1. The fact that nursing education, except in a few places in the United States, has never been recognized as an entity aside from the hospital service problem. Hospitals must find a way to take care of their nursing service problems without exploiting the student nurse.
2. Poor personnel policies. Hospitals that have paid good salaries and which have provided good living conditions have, comparatively speaking, had little difficulty in maintaining a fairly stable and adequate nursing staff during the war period.
3. A third basic problem, seldom recognized by doctors and hospital administrators, is that listed as number eleven, under duties and re-

sponsibilities expected of the graduate nurse. The nurses plea, contrary to Doctors Williams' and Warthen's statement, has always been that they be allowed to nurse the patient and be relieved of every task in the hospital, for which other personnel cannot be found.

The primary objective and aim of every professional nurse is either to *give good* bedside nursing care to the patient herself, or *to teach* others to give good nursing care.

The basic difference of opinion between some members of the medical profession and the nursing profession seems to be not in what a nurse should know, but in the length of time it takes to learn it. The doctor thinks all student nurses are geniuses, able to swallow a mountain of knowledge in one big gulp, while educators, and not nurse educators alone, know from experience that it takes time *to teach*, guide, and direct young people into good techniques of a profession.

The day of *training* nurses is past; we must *educate* nurses, and education takes *time*.

Annual Report: State Department of Health.

When one studies the most recent reports, Thirty-Fifth and Thirty-Sixth, of the State Department of Health, one cannot but be mindful of the tremendous volume of protection given to the public by this department. This, in spite of the fact that in most instances there was an acute shortage of personnel. It is, therefore, noteworthy that those remaining have put forth their best efforts so that the cause of public health has not suffered. Many departments have been consolidated in order to carry on basic functions. Also, such recent laws as to sanitary inspection of hotels and other food establishments, swimming pools, and summer camps have been added to the duties of the department. One of the most acute shortages of personnel was noted in the Bureau of Nursing and much credit is due the relatively small corps remaining for outstanding service and the willingness to assume extra obligations.

Much attention has been given to the water supplies throughout the State, and many new systems were established with the aid of Federal funds. Our large shellfish industry came in for considerable study, careful observation, and inspections.

It is significant to note that during the biennium the death rate was the lowest on record. We must not forget that these were war years, and this is a commendable accomplishment.

During the period covered by this report, June, 1942 to June, 1944, the presence of the various communicable diseases did not show any very marked increase over former years. Poliomyelitis reached an all time low in 1942. Typhoid fever continues to decrease each year from a rate of 8.8 in 1942 to 7.5 in 1943. When one recalls the time that typhoid was in nearly every community, and now only finds 216 cases reported for the entire State, he can see here the great advances in public health over former years. Though several outbreaks are recorded, methods of epidemiology and control are far more efficient, thus enabling the departments to hold these to a minimum.

This complete report is worthy of study by citizens of the State, who, in turn, should bend their efforts toward aiding the Health Commissioner and the personnel of his department in obtaining more appropriations to further this important function for all of the people.

C. L. OUTLAND.

FURTHER COMMENTS ON THE Rh FACTOR

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

In studying the mechanism of the formation of a factor in the plasma capable of agglutinating the red cells of an Rh positive donor, it is to be noted that, during the first pregnancy (with an Rh negative mother and Rh positive father) that factor may be formed but the baby of that pregnancy is usually undisturbed. Even though the father is Rh positive and the mother Rh negative, there will not be an Rh problem produced except in approximately one in fifty cases. With subsequent pregnancies the concentration of that factor may be increased so that the baby of the third or fourth pregnancy may be involved. Frequently the second or third baby may be jaundiced or anemic, then the third or fourth have a more severe blood destruction or be born dead with a hydrops variety of erythroblastosis foetalis.

If the mother were Rh negative and had received an Rh positive blood transfusion during her childhood, she would have developed this factor in the plasma before marriage, and, thereby, endanger the life of her first or second baby. In the same manner the first Rh positive blood transfusion in an Rh negative patient may result in the formation of the agglutinating factor in the patient's plasma so that subsequent transfusions with Rh positive blood increase the concentration of the agglutinating factor to the point that a reaction occurs.

In a woman who has had an erythroblastotic baby, the agglutinating factor is already present in high concentration and, if given a transfusion with Rh positive blood, she would have a severe reaction with the first transfusion.

Levine states that "In the past three years it has become increasingly clear that once an Rh negative individual is immunized either by repeated transfusions or by pregnancies, he or she must be considered as remaining immunized for the remainder of his or her natural lifetime. Thus, a woman who delivered an erythroblastotic infant eleven years previously has tolerated one transfusion of Rh positive blood but the following transfusion with Rh positive blood resulted in a violent reaction and anemia. An Rh negative woman was deprived of an opportunity of having one or two normal Rh positive children because, as a child of six years, she was already immunized by several transfusions. It is significant that, in this case, the first-born had the most severe form of erythroblastosis; ie, foetal hydrops. Accordingly, it is necessary to consider the advisability of introducing in pediatrics the routine practice of carrying out Rh tests in all female patients to be transfused. In transfusing an Rh negative, female infant, it is essential to keep in mind the possibility of future pregnancies. In a broader sense, no girl or woman, regardless of age, should be transfused unless tests for Rh are carried out. Those found to be Rh negative must receive *only* Rh negative blood."

NOTE: Physicians should take the time to allay the fears of prospective mothers since the occurrence of this condition is rather rare. Many women are markedly disturbed because of lay publicity on this subject.

PUBLIC HEALTH

I. C. RIGGIN, M.D.
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for June, 1946, as compared with the same month in 1945, and for the period of January through April, 1946, compared with the same period in 1945, follows:

	June 1946	June 1945	Jan.-June 1946	Jan.-June 1945
Typhoid and Paratyphoid	12	22	39	45
Diarrhea and Dysentery	448	562	1,171	1,583
Measles	2,411	116	12,242	1,185
Scarlet Fever	206	241	1,952	2,542
Diphtheria	26	16	225	133
Poliomyelitis	--	12	8	26
Meningitis	16	21	148	164
Undulant Fever	10	2	29	11
Rocky Mountain Spotted Fever	23	10	31	18
Tularemia	5	6	34	23

POLIOMYELITIS

After two years, 1944 and 1945, in which Virginia experienced increased prevalence in the incidence of poliomyelitis, there should be relatively few cases this year. To date there have been only eight reported, none of which occurred in the month of June. Since June is the beginning of the poliomyelitis season in Virginia, and the month when an increase in this disease often first appears, this observation is significant. Moreover, since 1910, when poliomyelitis was first tabulated in Virginia, there has been only one other year in which no cases were reported in June, and that was 1936, a low year following the epidemic year of 1935.

In reviewing the history of poliomyelitis in Virginia one observation is apparent: a year of high incidence of poliomyelitis is followed by a second when the disease is still unusually prevalent, and then by two to four years of very low incidence. For example, 1923 (148 reported cases) and 1924 (127 reported cases) were followed by four low years, 1929 (325 reported cases) and 1930 (119 reported cases) by four low years, and 1940 (241 reported cases) and 1941 (155 reported cases) by two low years. The one exception is 1935 (685 reported cases) followed immediately by four low years. Judging from past experience then, Virginia has every reason to expect at least two years relatively free from poliomyelitis.

While it is still too early to state exactly where and how hard poliomyelitis will strike this year, it already has appeared in alarming proportions in four places: Miami, Florida; Florence, Alabama; Corpus Christi, Texas; and Denver, Colorado. In these four States the peak number of cases normally occurs anywhere between the first of August and the middle of September. Undoubtedly, then, poliomyelitis is still increasing in these States and will reach epidemic proportions before the year is out.

Through the week ending June 15th, 1,381 cases of poliomyelitis had been reported in the United States this year. This is a little better than one case per hundred thousand population. Being very conservative and saying that any State reporting more than two cases per hundred thousand population up to this time probably will have a marked increase in the incidence of infantile paralysis before the peak season is reached in late summer, the following States should be watched: Alabama, California, Colorado, Florida, Louisiana, Mississippi, Montana, New Mexico, Texas, and Washington. Since Montana, New Mexico and Washington reported most of their cases in February and March, and have had relatively few since, there probably will be no real increase in those States this year. In the others, however, the reports indicate that poliomyelitis is increasing.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President — MRS. P. M. CHICHESTER, Richmond
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Recording Secretary — MRS. NATHAN SCHUMAN, Alexandria
Corresponding Secretary — MRS. L. C. BRAWNER, Richmond
Treasurer — MRS. REUBEN F. SIMMS, Richmond

The Annual Meeting of the Woman's Auxiliary to the Medical Society of Virginia will be held on Tuesday, October the fifteenth at the Cavalier Hotel, Virginia Beach.

Mrs. H. F. Dormire of Virginia Beach has consented to be chairman of local arrangements. She and her committee and the members of the Norfolk Auxiliary wish to make the convention a happy and successful one.

It is hoped that there will be a full attendance of members of the board of directors, county presidents, presidents-elect, officers, delegates and visitors.

The Doctor's Wife*

ROCK SLEYSTER, M.D.,
President, American Medical Association, 1939.

After an experience of some thirty-six years as the husband of a doctor's wife, I am appreciative of the fact that no single influence helps to develop and mold the doctor as does his nearest partner in the business and adventure of life. The development of character, of personality, of standards, of ideals, of humanness depend upon her influence as upon no other. And his success and influence in his community depend upon these qualities as much as upon his scientific attainments.

We are living in a muddled world—a world which is looking for leadership. The future of medicine and the future of this world depend upon the leadership which it develops. Leadership can influence only as a result of confidence, and it is to you wives of doctors I want to appeal to develop in your men those qualities which will inspire the confidence necessary that they may mold the thought of their community in matters relating to health.

To understand your doctor and his job you must go back to a time (possibly before you knew him), a time when he made the great decision to give his life to the care of the sick. No ambition for power, or fame or glory or riches prompted him in his choice of a career. Rather it was his interest in science and his love of service. It was the highest idealism of youth motivating him when he determined on the hardest, the longest and the most expensive preparatory education to take up a life work whose main reward is the satisfaction of service well done. It is this idealism, this willingness to sacrifice, this sense of values, which you as his partner must share with him and must keep alive in him.

Nothing—and I say this without the slightest mental reservation—nothing is as important in shaping the doctor's career as is his wife and his home. The doctor's wife must share his idealism, appreciate a standard of values held by no other group, and give to him an understanding required of few. Being a doctor's wife is both an art and a career.

First, she can never exercise quite the prerogatives of ownership which other wives claim, for the public feels and exercises a joint sense of ownership in him as well. His time is theirs, day or night, and they do not hesitate to intrude. Plans are difficult to make and to fulfill, and life is full of bitter disappointments because of this, disappointments which the doctor can accept more easily than his wife. His life, his habits, his mode of living, his personality, and even his private affairs are subjects of discussion and criticism, as is true of no other with the possible exception of the clergyman. This requires an unusual restraint on her part and an exercise of emotional control, for as his partner she is the victim of all this as much as he. Instead of reacting with bitterness and resentment, she must be prepared to submerge her feelings and exercise a steadying influence on him.

There are many temptations in his professional career which must be met. There is with need at times the temptation to commercialism. With fatigue, there is the urge for relaxation and amusement at the expense of necessary reading and study

*Address to the Woman's Auxiliary to the American Medical Association in St. Louis, May 17, 1939.
Reprinted in the Bulletin with the permission of Mrs. Sleyster.

that he may bring all that is new to the bedside of the sick. There is the temptation to be truant to the meetings of his medical organization for these same reasons. There is the urge to retaliate and strike back at fancied or actual wrongs at the hands of his colleagues. There is the opportunity to advance at the expense of others by unfair advantage. In all of these, and in many other circumstances, the temptation will be as great to his wife as to the doctor. She will want material rewards, more rest for him, more of his time and companionship—even more than he—and her whole inclination will be to fight fiercely in his defense. But this cannot be; hers must be the influence to keep his aim at the stars, his purpose unchanged, his ideals in no way lowered and his character outstanding and above reproach. Considering all the responsibilities he carries and the support he requires in assuming it, the job of being a doctor's wife is, as I have stated, an art and a career.

But when autumn days are here and the task must be lightened, you will be standing with him in the twilight as he passes on to younger hands the glory of a professional career above reproach, a career perhaps without material reward but a career good and clean and true to all the teachings of a great physician who came to us from Galilee. And as you stand hand and hand and look back over the years, there will be the joy and satisfaction of hearing him say—"You were my partner—it was possible only because of you."

Northampton-Accomac Auxiliary.

The Woman's Auxiliary to the Northampton-Accomac Medical Societies enjoyed its annual summer outing and picnic on July 9th as guests for the third time of Mrs. W. L. Cosby at her cottage, "Funfrus", at Silver Beach. A delicious luncheon was followed by swimming and sun bathing by members and guests, and it was with regret the members took leave of their hostess after such a delightful outing. There were sixteen members and twelve guests present.

At the October meeting the Auxiliary will be the guests of Mrs. John Wise Kellam at her cottage at Silver Beach.

CATHERINE R. TROWER, (MRS. HOLLAND)
Chairman, Press and Publicity.

BOOK ANNOUNCEMENTS

Books received for review are promptly acknowledged in this column. In most cases reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Human Embryology. By BRADLEY M. PATTEN, Ph.D., Professor of Anatomy, University of Michigan Medical School. Philadelphia, The Blakiston Company. 1946. 776 pages, with 1366 drawings and photographs, grouped as 446 illustrations, 53 in color. Cloth. Price $7.00.

Diseases of the Retina. By HERMAN ELWYN, M.D., Senior Assistant Surgeon, New York Eye and Ear Infirmary. Philadelphia, The Blakiston Company. 1946. xi-587 pages, with 170 Illustrations, 19 in color. Cloth. Price $10.00.

A Sketch of Medicine and Pharmacy. With a View of its Progress by the Massengill Family from the Fifteenth to the Twentieth Century. By SAMUEL EVANS MASSENGILL, M.D. Printed by The S. E. Massengill Company, Bristol, Tennessee. 445 pages. Cloth.

Pneumoperitoneum Treatment. By ANDREW LADISLAU BANYAI, M.D., F.A.C.P., F.C.C.P., Associate Clinical Professor of Medicine, Marquette University Medical School, Milwaukee, Wis.; Formerly Preceptor in Tuberculosis, School of Medicine, University of Wisconsin; etc. St. Louis, The C. V. Mosby Company. 1946. 376 pages, with 74 illustrations. Cloth. Price $6.50.

Medical Services by Government. Local, State and Federal. By BERNHARD J. STERN, Ph.D., Lecturer in Sociology, Columbia University. New York, The Commonwealth Fund. 1946. xiv-208 pages. Cloth. Price $1.50.

EDITORIAL

Professional Opportunity

WE are convinced that no piece of legislation, local, state or federal, has ever caused so much discussion of doctors and the medical profession as the Wagner-Murray-Dingell Bill.

In these discussions attention has been directed with great emphasis on (1) the poor health and bad physical conditions of the American people, (2) the distressing need of extending medical care to more of our citizens, (3) a distribution of the cost of medical care among more people and spreading the cost to an individual or family over a longer period of time, (4) the apathy on the part of members of the medical profession to these items of conditions, and (5) the inclination on the part of doctors to be against everything and for nothing.

Proponents and supporters of the Wagner-Murray-Dingell Bill infer by their attitude and action, if they do not indeed say so, that the medical profession is entirely responsible for the health of our citizenry, that doctors have not lived up to their responsibility and furthermore are unwilling to lend an open ear or an extended hand to the medical need of our people.

The public has been told far and wide that the apathetic, *laissez faire* and sit-tight attitude of the medical profession is such that the federal government must come to the rescue of these millions of helpless ill people whose calls for medical care get little or no response because of the doctor's preference to serve those well able to pay exhorbitant fees.

Make no mistake about it—these and similar charges have been filling the ears (ears not too unwilling to listen) of the American public, from the press, legislative halls, organized groups, radio, and by word of mouth, and much of it is believed.

In view of all this and much more, are you conscious of how little the public has been told of the real picture—of the facts as they exist? Unquestionably the doctors of Virginia, as well as of other states, have a golden opportunity to do two things. First—carry their story to the public—it's an interesting story and the public is anxious for it. Second—get every member of the profession to participate in and actively support pre-payment medical care plans for lower income groups.

Congress will convene in January, 1947. Can we fail to show that our doctors in Virginia are wholeheartedly endeavoring to provide a means whereby every person in Virginia can get medical care? Can we afford to sit idly by and let the public (voters and supporters of our Congressmen) continue to get inaccurate figures, warped surveys, and false impressions, to the end that a plan or system of medical care is set up by the Federal Government, when the institution of such a plan or system would in effect result in a serious deterioration of the quality of medical service?

In this instance the members of the medical profession have a responsibility to the public—that of preserving our private system of medicine and further improving its present high standards.

This issue is being discussed freely, analyzed and weighed by the public. They cannot be left to decide the question without the facts. The public must be informed.

Both of these opportunities are in the hands of our doctors.

Unquestionably, this also essentially represents the views expressed by the presidents, executive secretaries and other officials at their American Medical Association meeting in San Francisco.

HENRY S. JOHNSON, *Director,*
Public Relations and Medical Service

Analysis of Current Legislative Proposals to Nationalize Medicine in the United States

THE above was the title of an address delivered by Marjorie Shearon, Ph.D., Research Analyst, at the Annual Meeting of the National Industrial Conference Board. It is by far the best analysis we have seen on the subject. Every tax payer in the United States should read the full address. Her opening paragraph sets forth the complexities of the question.

"Compulsory sickness insurance is a controversial and little understood device of political action. Proponents of compulsion often vitiate their arguments with emotional appeals, dubious statistics, and offensive red herrings. Opponents, on the other hand, weaken their cause when they hurl unsubstantiated epithets of communism, socialism and State medicine. Unfortunately, this branch of social insurance is so technical that few persons have either time or inclination to study its social and political implications. Yet, if a comprehensive system of Federal compulsory sickness insurance were to be established by Act of Congress every man, woman and child in the United States would be affected by the ensuing social revolution. Thus, regardless of the complexity of the subject, we should examine for our own protection not only the history of this political device but its administrative pattern, its social implications, and its fiscal burdens."

For an historical background one must go back to Bismarck. In 1880 Bismarck needed money for his government, and he needed votes. He turned to his economic advisor who strangely enough was named Wagner. Adolph Wagner was professor of political science at the University of Berlin. Prof. Wagner believed in public ownership of banking, insurance, communication and utilities, and State insurance against sickness incapacity and old age. "He likewise proposed and justified a new scheme of taxation that would not only serve the legitimate purpose of raising revenues but would at the same time fulfill the purpose of what he called 'regulative interference.'" By this he meant regulating (1) the distribution of income and wealth and (2) the purchasing power and living habits of the "lower classes." Wagner called this two sided policy of taxation "Social". In his speech before the Reichstag Bismarck called it "practical Christianity". He induced the Reichstag to approve his new plan for taxing the workers thereby making them shoulder the burden of most of their own poor relief. German sickness insurance was financed by taxes on employers and employees, the workers, until 1934, paying two-thirds of the cost. The Government provided the compulsion and interference. Labor and management footed the bills. When Hitler came into power he dissolved the two leading professional organizations of German doctors and gave exclusive legal status to the sickness insurance doctors. This group was given authority to furnish medical services to insured and uninsured persons and to decide on remuneration. Punishments were devised for physicians and patients: the rights of the individual were abrogated. This *was* done in Germany. It could be done here. These words are not those of a doctor of medicine but of a trained research analyst.

The Bismarck plan of social insurance has been adopted in over thirty countries, generally as a political, fiscal and regulatory device. The schemes for compulsory sickness insurance have in the main followed the original pattern. The destructive characteristics of compulsion and regulatory interference are integral parts of all. Some countries have broader coverage, others more restricted. Great Britain insured only 40 per cent of the population and excluded dependents. Russia, on the other

hand, covered the entire population and made all physicians salaried servants of the State.

How has this plan worked? I. S. Falk, who is generally credited with being the leader of the movement to establish Federal compulsory sickness insurance in the United States says that the German plan paid too little attention to public health activities. The German insurance practitioners were underpaid and suffered from lay controls. Long and acrimonious wars were fought among the insurance societies, the professions and the insured persons over the questions of "free choice of doctor", "professional freedom from lay control", "adequate professional income", "red tape", "certification for disability", etc., etc. Our research Analyst wonders why, in the light of these facts, all the defects of compulsory sickness insurance should have been written into the successive Wagner-Murray-Dingell bills.

It is argued that the Wagner-Murray-Dingell legislation should be enacted forthwith in order to induce physicians to settle in rural areas. That has not been the experience in Germany. After fifty years of operation "the physicians of Germany are located in excessive proportions in the large cities and in inadequate proportions in rural areas" (Falk).

The claim has been made repeatedly that compulsory sickness insurance does not change the practice of medicine. Patients, it is said, will be free to enter or to remain in the System, physicians will enjoy similar freedom. Patients may freely choose their physicians from among those who have consented to become insurance practitioners and have signed a contract with the Federal Government to abide by the rules and regulations to be issued in Washington. "Is this freedom?" asks our Analyst. "Patients would have about as much freedom as a prisoner in a Federal penitentiary would have if given a choice of working on the rock pile or in the prison laundry. Physicians on their part would be expected to make a blind date with the officials in Washington who would one day promulgate the insurance rules and regulations which would have the force of law." Under the Wagner-Murray-Dingell bill specialists would be available, as a rule, only on the advice of the insurance doctor. Obviously there might be occasions when a patient would demand a specialist and the insurance practitioner in the interests of economy would refuse his consent. In such a case the patient would be compelled to refer his appeal for the services of specialists and consultants to the local medical administrative officer appointed by the Surgeon-General. Anyone who has endeavored to obtain quick action on an appeal to a Government agency in connection, let us say, with an O P A regulation, will appreciate that a critically ill patient would probably be dead before he could obtain a ruling on his "right" to specialists and consultant services. These are words, not of a doctor of medicine, but of an expert on analyzing laws.

It is claimed that the Wagner-Murray-Dingell bill would provide the insured with the best modern medical care. The bill does not so promise. It specifies cheap and limited services—not less than $3.00 or more than $7.00 per day of hospitalization, not in excess of thirty days. These are words, not of a doctor of medicine, but of an expert on analyzing laws.

The degree of "regulative interference" with patients and physicians under the British and German sickness insurance schemes is unbelievable. The insurance system in Germany is policed by medical referees "in respect of the economy and the standards of medical treatment". There is one such referee for every 25,000 insured persons. Among their many duties is to pass on the admission of patients to hospitals. Doctors are under strict control with respect to the prescriptions they may write. The

standard cost of prescribing per case treated is fixed in the national agreement for the whole country. If, on investigation by a medical referee, it is decided that an insurance doctor has written prescriptions that are deemed too expensive, or has prescribed costly new drugs without sufficient justification, the doctor may be penalized by having the excess amounts deducted from his government reimbursement. These are only a few of the restrictions that hamper physicians under compulsory sickness insurance schemes. The International Labor Office has published an exhaustive volume entitled "Economical Administration of Health Insurance Benefits". There are rules for the conduct of patients, rules for doctors, rules for hospitals, rules for prescribing, etc. In Great Britain every insurance practitioner has on his desk a volume of over 350 pages known as the "Doctor's Bible" which informs him as to what he may or may not do. It is of the utmost importance to realize that the three Wagner-Murray-Dingell bills were not drafted along American lines but are in direct conformity with the international provisions which have been laid down by the International Labor Office, which in turn largely reflect the German viewpoint with respect to the nationalization of medicine and the concentration of power in central governments.

The bills are so drafted with respect to compulsory sickness insurance that the main administrative authority over the lives of all the people in this country would be subtly vested in the Social Security Board. The Surgeon General of the Public Health Service would have to go hat in hand to the Chairman of the Social Security Board for approval of the contracts he would make with hospitals, doctors and dentists. These may seem like unimportant details until it is realized that they are the essence of control. That such legislation would lead to the abolition of the private practice of medicine is freely admitted by the International Labor Office.

It would be impossible for a mere three per cent of payrolls to deliver to the American people the type of best and complete modern medical care that has been promised. We would not have the facilities or the health personnel even within ten years. It would take the full time of all the doctors in the country to spend as little as two hours a year on complete health examinations for everyone in the country. The gap between the promises in connection with the Wagner-Murray-Dingell bills and the possible performance is indicative of a lack of candor on the part of Government experts who withhold from Congress and the public the facts which they have in their possession and which should be made public.

We would like to conclude this already too long editorial with one more quotation from our research Analyst. "One can not have freedom within the framework of compulsory sickness insurance. It is political and bureaucratic double talk to speak of freedom and compulsion as conditions which may be enjoyed simultaneously. Perhaps the people of America wish to seek health under a scheme of nationalized medicine, but I doubt if this is the case. To the extent that they are 'sold' on the idea they have been 'sold' by glittering promises that cannot be fulfilled, and, I might add, they have been sold down the river."

EDITOR'S NOTE. Excerpts from a speech by Dr. Shearon to be published in full by the National Industrial Conference Board.

SOCIETIES

Fauquier County Medical Society.

At the meeting of this Society in Warrenton on June 13th, the following officers were re-elected: President, Dr. Vaden L. McCullers, Remington; vice-presidents, Dr. Henry L. Townsend, Marshall, and Dr. Walter G. Trow, Warrenton; and secretary-treasurer, Dr. J. Frank Folk, Warrenton. Delegate and alternate to the State meeting in October were also elected.

Following this business, there was a general discussion led by Dr. J. E. Knight and Dr. William R. Pretlow, both of Warrenton, on service to veterans that may be rendered by the local hospital and local physicians.

Dr. M. B. Hiden, chairman of the Program Committee, recommended that each member of the Society make every effort to get as many as possible of his relatives, patients and friends to pay their poll taxes, register and vote, and that each member devote his best efforts to getting the vote out on election days, so that the next time one of our doctors writes a letter to his Congressman or to any other politician, the doctor, through his medical society, will have some votes that will stand behind his letter. This proposition was generally discussed by a large number of the doctors present and all of this discussion was favorable. It was the consensus of opinion that it was the duty of the medical society and the individual doctors to muster all the votes possible to the support of legislation affecting the medical profession and the welfare of their patients. No votes were cast against this plan and it was decided to present the details of the proposed political procedure at the next meeting.

Tazewell County Medical Society.

After routine business, at the April 25th meeting of this Society, Dr. J. W. Witten, a member of the Virginia State Legislature, gave an account of bills affecting the medical profession which were passed at the recent session of Legislature, and Dr. J. M. Peery, who served in the Pacific area during World War II, discussed in interesting detail the methods of treatment used by the United States Army in caring for injured soldiers.

Dr. Mary Elizabeth Johnston reviewed the aims of the Association of American Physicians and Surgeons, Inc., after which the members voted to endorse the efforts of this organization which is striving to defeat the undesirable plans for governmental control of the practice of medicine and surgery, now being considered by Congress. The secretary was instructed to send necessary information to the members of the Society and to urge them to join the Association.

It was decided to have the August meeting at the Tazewell County Country Club and to invite members of the Buchanan-Dickenson Medical Society and the Mercer County (W. Va.) Medical Society to be guests of the Society. Drs. R. Brittain, J. M. Peery and J. J. Porter were appointed as the committee of arrangements for that meeting.

Dr. A. D. Parson and Dr. J. A. Robinson, both of Richlands, are president and secretary of the Society, respectively.

The Lee County Medical Society,

Which suspended meetings during the war while several of its members were in Service, resumed its activities with a meeting on May the 27th and meetings will now be held monthly on the fourth Wednesdays. At the May meeting, the following were elected officers for the ensuing year: President, Dr. George B. Setzler of Pennington Gap; vice-president, Dr. G. C. Sumpter of Rose Hill; and secretary-treasurer, Dr. Thomas S. Ely of Jonesville.

NEWS

Virginia Beach Meeting.

As the meeting October 14, 15 and 16 is to be the first since a large number of the Medical Society of Virginia members returned from Service, a large attendance is expected. In fact, the Cavalier reported several weeks ago that all rooms had been taken for the meeting except a few parlor suites but that they then had a few rooms available in the new Cavalier Lodge. The management has suggested that those who have not made reservations should communicate direct with one of the following which will be open at that time:

Gay Manor, Ocean Front at 39th

Beach Plaza, Ocean Front near 22nd.

Pinewood, Ocean Front at 9th

The Cavalier is on Ocean Front at 42nd Street.

The attractions of Virginia Beach are so well known to all Virginians, that we can add little to induce you to take a vacation there at that season.

Attention, Golfers!

We have permission to put on a tournament at the Cavalier Golf Club on Sunday, October 13th, the day before the opening session of the Medical Society of Virginia, provided there are a sufficient number of doctors who would care to play. If interested, please communicate as soon as possible with Dr. Clayton W. Eley, 300 Wainwright Building, Norfolk 10, Virginia. In your letter please state your club handicap, as this will greatly facilitate arranging the foursomes.

An Appreciation of the Services of Dr. Moncure and Dr. Stephenson.

In accordance with the recently revised Medical Practice Act, members of the State Board of Medical Examiners who have served as many as two terms cannot succeed themselves. For this reason it became necessary this year for the Governor to make new appointments for the Second and Third Districts. These will fill positions held for many years by Dr. P. St. L. Moncure of Norfolk and Dr. H. U. Stephenson of Richmond. Dr. Moncure has served on the Board continuously since June 1918 and Dr. Stephenson since December of the same year.

The State Board of Medical Examiners at its last meeting in June passed the following resolution in appreciation of the splendid work done by these two doctors through the years:

"We take note of the fact that the terms of office of Dr. P. St. L. Moncure of Norfolk and Dr. H. U. Stephenson of Richmond expire June 30. We take this occasion to express our appreciation of their long years of service. They have been loyal and conscientious servants of the profession and of the public, valuable members of this Board. We feel it proper that recognition of their services be recorded, and therefore, ask our Secretary to transmit this resolution to the VIRGINIA MEDICAL MONTHLY and the public press, requesting its publication."

Appointed Members of the State Board of Medical Examiners.

Governor Tuck has announced the appointment of Dr. George H. Carr, Jr., of Portsmouth, and Dr. Guy W. Horsley of Richmond as members of the State Board of Medical Examiners for the Second and Third Districts, respectively, succeeding Dr. P. St. L. Moncure and Dr. H. U. Stephenson, whose terms of office expired July 1.

American Medical Association.

At the meeting in San Francisco, the first week in July, Dr. Olin West, who retired last April as secretary and general manager of the Association after a service of twenty-four years, was unanimously named presdient-elect. Dr. H. H. Shoulders of Nashville, Tenn., succeeded to the presidency, and Dr. Edward L. Bortz of Philadelphia was selected as president-elect. Dr. George F. Lull, recently appointed to the office of secretary and general manager, was elected to that office for the coming year, and Dr. J. J. Moore of Chicago was re-elected treasurer. Atlantic City was previously selected as the 1947 place of meeting and St. Louis for 1948. New York was tentatively selected for 1949 if suitable space can be had for the meeting.

Dr. James L. Hamner

Of Mannboro has been appointed by Governor Tuck to the State Board of Health for a seven-year term, effective July 1. He succeeds Dr. J. Bolling Jones of Petersburg, resigned.

The Third Refresher Course

For medical veterans of World War II was held by the Department of Medicine of the University of Virginia in Charlottesville from June 3rd to 15th. The lectures, ward rounds and clinics were given by members of the University Medical Faculty and

the evening sessions were devoted to lectures by invited guests. There was an enrollment of 26 for the course. Twenty-four of these were veterans. The veterans attending the course were:

Dr. William R. Watkins, South Boston.
Dr. John C. Hawk, Jr., Charlottesville.
Dr. R. J. Sykes, Durham, N. C.
Dr. Philip C. Whitehead, Chatham.
Dr. Phil W. Smith, Crozet.
Capt. Leonard I. Malis, Coatesville, Penna.
Dr. Forrest Elliott Oglesby, Emporia.
Dr. Lewis F. Somers, Lynchburg.
Dr. E. B. Robertson, Danville.
Dr. James T. O'Neal, Amelia.
Dr. Nevin H. Seitz, Hanover, Penna.
Dr. J. L. Walker, Bowdon, Ga.
Dr. Charles F. Gaylord, Staunton.
Dr. Charles Lupton, Jr., Durham, N. C.
Dr. Charles W. Warren, Upperville.
Dr. W. C. Elliott, Lebanon.
Dr. J. W. Elliott, Lebanon.
Dr. Newton Lancaster, Waynesville, N. C.
Dr. Charles J. Sites, Uppertract, W. Va.
Dr. Thomas Stringfield, Jr., Waynesville, N. C.
Col. A. A. Sparkman, Martin, Tenn.
Dr. Lewis B. Ziv, Portsmouth.
Dr. Brooke B. Mallory, Lexington.
Dr. William W. Zimmerman, Purcellville.

The two civilian physicians were:

Dr. V. W. Quillen, Nickelsville.
Dr. J. H. Yeatman, Fork Union.

This course was the third of four to be given alternately every three months for the next year by the Department of Medicine of the University of Virginia and the School of Medicine of the Medical College of Virginia. The next course will be held in September, 1946, at Richmond.

Dr. William Pembleton,

Recently engaged in the practice of internal medicine in Richmond, is at the Hartford Hospital, Hartford, Conn., where he is taking special work in anesthesiology for about a year.

Dr. Charles H. Dow,

Who returned from medical service with the Air Corps about a year ago, has located in Roanoke where he is connected with the Gill Memorial Eye, Ear and Throat Hospital. Before entering the Service, Dr. Dow was practicing at Chilhowie and, since his return, has been taking a special course in otolaryngology at the Graduate School of Medicine of the University of Pennsylvania.

Dr. Orrin K. Phlegar,

Who has been located in Dayton, Ohio, for nearly two years, has returned to his former home at Bluefield, Va.

Dr. Joseph E. Cox,

Pediatrician of Waynesboro, has accepted a position with the Veterans Administration as a doctor of medicine, senior grade, and has been assigned to the Veterans Hospital at Albuquerque, New Mexico. He left in July for this appointment.

The Southern Psychiatric Association

Will hold its annual sessions at the Jefferson Hotel in Richmond on October 7 and 8. The last meeting of the Association was held in Nashville in 1941, under the presidency of Dr. Arthur J. Schwenkenberg, of Dallas. The present officers of the Association are: Dr. Whitman C. McConnell, St. Petersburg, Florida, President; Dr. James K. Hall, Richmond, President Elect; Dr. Edmund McC. Connelly, New Orleans, Vice-President; Dr. Arthur J. Schwenkenberg, Dallas, and Dr. John S. Hickman, Meridian, Miss., Councillors; and Dr. Newdigate M. Owensby, Atlanta, Georgia, Secretary-Treasurer.

The American College of Physicians

Announces its 28th annual session to be held in Chicago, Ill., April 28-May 2, 1947. Dr. David P. Barr, New York, is President of the College, and will be in charge of the program of General Sessions and Lectures. Dr. LeRoy H. Sloan, Chicago, has been appointed General Chairman, and will be in charge of the program of Hospital Clinics and Panels, as well as local arrangements, entertainment, etc. Mr. Edward R. Loveland, Executive Secretary of the College, 4200 Pine Street, Philadelphia 4, will have charge of the general management of the session and the technical exhibits.

Other medical societies are urged to note these dates in order that conflicts in meeting dates may be avoided for mutual benefit.

Dr. Plecker Retires.

Dr. W. A. Plecker retired on July 1st as Director of Virginia's Vital Statistics Bureau, which he organized in 1912. During his administration the birth of every Virginian under the age of 34 has been recorded in his office. His assistant, Miss Marks, is acting in his place until a director is named. Dr. Plecker contemplated retirement before

the war but kept at his work during the emergency. He stated that he planned to continue his racial studies in which he has been much interested.

In Civilian Practice Again.

Names of members of the Medical Society of Virginia not previously announced in our pages as being separated from service with the Armed Forces, are:

Dr. Donald L. Arey, Danville.
Dr. Glenn H. Baird, Abingdon (temporarily at Agenda, Kan.)
Dr. Robley D. Bates, Jr., Richmond.
Dr. Julian R. Beckwith, Clifton Forge.
Dr. F. I. Bloise, Richmond.
Dr. Harry Brick, Richmond.
Dr. G. R. Carpenter, Richmond.
Dr. C. C. Chewning, Richmond.
Dr. James J. Clark, Richmond.
Dr. Franklin H. Cohen, Norfolk.
Dr. E. L. Crumpacker, Roanoke (formerly Williamsburg).
Dr. A. C. Davis, Roanoke.
Dr. J. W. Devine, Jr., Lynchburg.
Dr. Burton E. Field, Richmond.
Dr. H. D. Fitzpatrick, Radford.
Dr. W. P. Frazer, Hamilton.
Dr. H. M. Frieden, Norfolk.
Dr. John F. Gayle, Newport News.
Dr. Garrett G. Gooch, III, Roanoke.
Dr. R. H. Harrington, Marion.
Dr. Ivor D. Harris, Charlottesville (now Detroit, Mich.)
Dr. H. R. Hartwell, Bedford.
Dr. Henry A. Hornthal, Washington, D. C.
Dr. H. D. Hoskins, Lynchburg.
Dr. C. E. Jenkins, Alexandria.
Dr. G. Richardson Joyner, Suffolk.
Dr. Arthur Klein, Richmond.
Dr. Theodore Kohn, Richmond.
Dr. M. B. Lamberth, Jr., Richmond.
Dr. E. M. LaPrade, Richmond.
Dr. B. I. Lidman, Norfolk.
Dr. N. S. Lieberman, Portsmouth.
Dr. George W. McCall, Bristol.
Dr. H. C. McCoy, Gordonsville.
Dr. John O. McNeel, Charlottesville.
Dr. John G. McNiel, Manassas.
Dr. M. E. McRae, Richmond.
Dr. S. H. Mirmelstein, Newport News.
Dr. E. Berkeley Neal, Roanoke.
Dr. I. M. Nuckols, Mt. Sidney.
Dr. Leland R. O'Brian, Lynchburg.
Dr. C. G. O'Brien, Appomattox.
Dr. Boyd H. Payne, Staunton.
Dr. J. J. Porter, Appalachia.
Dr. W. O. Porter, Roanoke.
Dr. Guy C. Richardson, Bristol.
Dr. Edward B. Robertson, Danville.
Dr. Thomas Scarlett, Harrisonburg.
Dr. William P. Sellers, Norfolk.
Dr. A. D. Shapiro, Roanoke.
Dr. William L. Sibley, Roanoke.
Dr. George H. Smith, Winchester.
Dr. Harry E. Sutelan, Norfolk.
Dr. James A. Thweatt, Petersburg.
Dr. M. H. Todd, Norfolk.
Dr. James Volpe, Jr., Jonesville (now Yuma, Ariz.).
Dr. J. Franklin Waddill, Norfolk.
Dr. C. W. Warren, Upperville.
Dr. H. B. Webb, Waynesboro.
Dr. M. Richard Whitehill, Norfolk.
Dr. Wm. B. Wilkins, West Palm Beach, Fla. (formerly Alexandria).
Dr. George Zur Williams, Richmond.
Dr. Garland Wolfe, Abingdon.
Dr. William H. Woodson, Newport News.
Dr. Louis B. Ziv, Portsmouth.

Dr. C. Howard Cain,

Who has practiced for some time at Colonial Heights, Petersburg, on July the 1st located at Wakefield, where he has taken over the offices of Dr. T. M. Raines who died in April.

Medical Care for Rural Virginia.

In cooperation with the Virginia Council on Health and Medical Care, Dr. W. E. Garnett, Rural Sociologist, of the Virginia Agricultural Experiment Station connected with the Virginia Polytechnic Institute, has prepared a progress report on Medical Care for Rural Virginia. This work was done at the request of officials of the Federation of Virginia Home Demonstration Clubs for use in a series of local club meetings. The report lists a number of advances made and rural needs still to be met.

Another of the Rural Sociology reports published recently is on The Housing of Virginia Rural Folk.

Dr. Roshier Miller Honored.

Dr. Roshier W. Miller, for twenty-six years a member of the Richmond City School Board, for eighteen of which he was chairman, was honored at a dinner given him by the former and new members of the Board at the Commonwealth Club on June the 25th.

Married.

Dr. Thomas Nelson Page Johns, son of Dr. and Mrs. Frank S. Johns of Richmond, and Miss Helen Cordier of East Hampton, L. I., N. Y., June 29. They are making their home in Baltimore where Dr. Johns is intern in surgery at Johns Hopkins Hospital.

Dr. P. W. Boyd,

Winchester, surgeon and apple grower. has been elected president of the Shenandoah Apple Blossom Festival for the coming year.

Dr. Funk Resigns.

The State Department of Health has sustained another loss in its personnel by the resignation, effective September 1st, of J. Clarence Funk, Sc.D., after an excellent service for ten years as director of health education. Dr. Funk came to this State from Pennsylvania, where he had served as chief of that State Bureau of Public Health Education.

Dr. Lemuel E. Mayo,

Recently separated from service with the Army Air Forces, announces that he is back in the practice of general and thoracic surgery and diagnostic bronchoscopy, with offices at 509 Professional Building, Portsmouth, and 339 Boush Street, Norfolk.

Richmond Tuberculosis Association.

At the annual meeting of the Association recently, Dr. Emily Gardner was re-elected president for the coming year. Dr. D. D. Talley, Jr., was elected one of the vice-presidents, and Dr. E. L. Kendig, Jr., was named to fill the honorary vice-presidency caused by the death of Mrs. J. K. Bowman.

Mr. Braun Honored at San Francisco Meeting.

At the recent meeting of the American Medical Association in San Francisco, Mr. Will C. Braun, for fifty-four years business and circulation manager for the Association, was tendered a dinner by his co-workers and other friends in appreciation of his splendid work and the cordial relations he had established with many leaders in commercial fields allied to medicine. On this occasion, Mr. Braun was presented with a handsome watch and fishing equipment as a token of appreciation. He had tendered his resignation to take effect at this time.

Full-Time Psychiatrist for State's Penal System.

Dr. Harry Brick, formerly a resident physician at Tucker Sanatorium, Richmond, recently returned from Service as an Army psychiatrist, has been appointed as full-time psychiatrist in the State penal system. To this time, Dr. J. Asa Shield, also of Tucker Sanatorium, has been doing psychiatric work in the penitentiary system on a part-time basis.

Drs. Peterson, Barker and Smith.

Dr. Charles H. Peterson, Dr. Allen Barker and Dr. Charles D. Smith announce their release from the Medical Corps of the Armed Forces and their return to the practice of Radiology in Roanoke.

Dr. Lyle E. Delap,

Formerly of Radford, announces his release from duty with the Army of the United States and his location in Narrows, where he will be engaged in general practice.

American Hearing Society.

On June 16, the members of the American Society for the Hard of Hearing voted to change the name of their organization to American Hearing Society. The Society states this change was made with the idea of placing emphasis on hearing, their wish being to conserve hearing, to stress hearing conservation programs and hearing centers. Better hearing is not their ultimate goal, but the best hearing.

Personnel Changes in State Department of Health.

Dr. T. F. McGough, recently released from medical service with the Army, has been appointed, as of July 10, Health Officer of the Peninsula Health District.

Dr. G. R. Carpenter, recently returned from duty in Austria with the Medical Corps, was appointed, as of July 1, Director of the Bureau of Cancer Control. Prior to his service abroad, Dr. Carpenter was Health Officer of Fairfax County.

Dr. Samuel C. Ingraham, II, recently released from his duties with the Tuberculosis Division of the U. S. Public Health Service, was appointed, as of July 1, Director of the Tuberculosis Out-Patient Service and Crippled Children Bureau.

Improvements in Services at McGuire Veterans Hospital.

Dr. E. M. Ellerson, manager, announces that three new drugs, portable pay station telephones for patients unable to leave their beds and additional equipment for issue to spinal cord injury patients when they go home are some of the improvements in services to veterans that McGuire Veterans Administration Hospital can now offer.

The three drugs recently released for general medical use and now added to those at McGuire are Folic Acid, member of vitamin B, complex group; Tridione, a compound which has proved effective in treating several forms of epilepsy that resisted drugs formerly used, and Thiouracil, used in treating hyperthyroidism.

The portable pay telephones, called telecarts, consist of the familiar coin-box telephone mounted on a rubber-tired contrivance that looks like a tea wagon. They are plugged into wall outlets.

A hospital bed with an overhead bar, an inner spring mattress and two mattress covers can be issued to spinal cord injury patients when they leave the hospital if doctors determine such items are needed for proper home care and treatment. VA has previously been able to issue wheel chairs, crutches and various sick bed equipment. This new arrangement makes it possible to issue the additional equipment without requesting special authorization in each case.

McGuire is one of the five VA centers for spinal cord cases in this country.

Dr. Norman Sollod,

Recently returned from Service, is completing a six months' course in Internal Medicine at Harvard Medical School, and will return to Richmond this month as a resident in medicine at the Veterans Hospital.

20th Anniversary of Gill Hospital.

On July the 1st, the Staff of the Gill Memorial Eye, Ear and Throat Hospital honored Dr. E. G. Gill, its founder, with a banquet on the occasion of its twentieth anniversary.

Dr. R. Brittain,

After practicing for some years at Jewell Ridge, has located in Tazewell.

National Arthritis Foundation.

The Foundation, to be located in Hot Springs National Park, Arkansas, is to serve as the national center for the study of the causes, treatment and prevention of arthritis and other rheumatic conditions. Announcement has been made of a campaign for $2,500,000 for the construction and equipment of buildings and for scientific personnel, and of the naming of Lionel Barrymore as Chairman of the National Board of Sponsors of the National Arthritis Research Foundation.

Endorsed by medical leaders including Dr. Thomas Parran, Surgeon General of the U. S. Public Health Service, Major General George F. Lull, former Deputy Surgeon General of the Army Service Forces, Dr. Morris Fishbein, Editor of *The Journal of the American Medical Association,* and other eminent scientists, the National Arthritis Research Foundation was started through the efforts of the officers and trustees of the Levi Memorial Hospital Association. This institution, national and non-sectarian, has been devoted since 1914 to the free care of arthritic victims. Since its inception, it has ministered without charge to approximately 185,000 sufferers of rheumatic conditions.

The National Arthritis Research Foundation will embrace the entire field of rheumatic ailments including arthritis, rheumatic fever and kindred diseases. Hot Springs is one of America's best known spas. Its thermal waters, under government control, will be one of the subjects of research in the treatment of these diseases.

Arthritis is the most widespread chronic disease and is regarded as being first in medical, economic and social importance. Rheumatic conditions afflict about 7,000,000 Americans, one person in every 20, and totals more cases than cancer, tuberculosis, diabetes and heart disease combined. Arthritis is also the oldest disease of which science has definite record.

Physicians Assigned to VA Hospitals.

According to a VA announcement, forty-three young physicians who received their medical education under the Army Specialized Training and Navy V-12 programs have been assigned to two Veterans Administration hospitals in Vriginia. These doctors recently completed their internship in civilian hospitals.

Assigned to the Roanoke hospital were 21 from the Army and seven from the Navy, while 12 Army and three Navy doctors were assigned to Kecoughtan. They were part of 107 young medical officers assigned to hospitals in the Richmond VA Branch area.

Dr. Henry M. Snead

Has given up his work in Petersburg and moved to Cumberland County, with his post-office at Columbia.

Dr. J. T. Showalter,

Christiansburg, of the class of '36, University of Virginia, Department of Medicine, has accepted an appointment for a year at the Lankenau Hospital, Philadelphia, entering upon his duties there on July the 1st.

Dr. Lewis G. Richards, Jr.,

Of Roanoke, is now serving in the U. S. Navy, on the hospital ship, U. S. S. Bountiful, and was at Bikini Atoll for the atom bomb test. Dr. Richards is a graduate of the class of '45, University of Virginia, Department of Medicine, later interning at St. Luke's Hospital, New York City.

Dr. L. E. Wexberg,

Of Washington, has been appointed as consultant psychiatrist, on a part time basis, to the Fairfax Mental Hygiene Clinic.

The National Gastroenterological Association

Announces that Capt. Irving B. Brick, M.C., A.U.S., was the winner of its 1946 Cash Prize Award Contest for the best unpublished manuscript on Gastroenterology on an allied subject.

His subject was "Radiation Effects on the Human Stomach: A Preliminary Report", and the $100.00 check was presented to him at the annual banquet of the Association, at the Hotel Pennsylvania, on June 20th.

Certificates of Merit were also awarded to Dr. Frank L. Apperly, Richmond, Va.; Dr. William Nimeh, Mexico City, Mexico; and Dr. Juan Nasio, Rosario, Argentina. The winning paper, as well as those receiving Certificates of Merit, will be published in the *Review of Gastroenterology* commencing with the September-October 1946 issue.

Color Therapy at VA Hospital.

The buff interior of a ward building at the Roanoke Veterans Administration hospital is taking on a new color—indeed, several colors. And this more pleasant effect is due to the fact that the hospital is developing color therapy—the use of the energy in colors to aid the recovery of the physically or mentally sick—as a part of its general treatment program.

Colors of the right kind and in proper combinations exert a profound influence upon the brain and nervous system of patients, explained Dr. Peter A. Peffer, hospital manager, pointing out that color not only appeals to the eye but has a definite effect upon the mental and physical state. He said the use of color dynamics as it relates to color therapy is a revolutionary change toward color in a hospital which only a few years ago was considered unsound, adding that it is now generally agreed that the atmosphere within a hospital must be made colorful to aid the recovery of the sick.

Basic color tones being applied to the interior of the ward building at the Roanoke hospital are rose tan, stratosphere gray, eye rest green, suntone, cascade blue and bone white.

Noted British Editor Joins Board of Quarterly Review of Obstetrics and Gynecology.

The Washington Institute of Medicine announces the addition to the already notable editorial board of the Quarterly Review of Obstetrics and Gynecology of Professor James Young, D.S.O., M.D., F.R.C.S.Ed., F.R.C.O.G., London, England, internationally known both for his clinical achievements and for his authoritative editorship of "The British Journal of Obstetrics and Gynecology".

Many readers of the MONTHLY will recall Dr. Young's visit to Virginia in 1935, when he delivered the Joseph Price Oration before the American Association of Obstetricians, Gynecologists and Abdominal Surgeons. At that time he had just taken charge of the Department of Obstetrics and Gynecology of the newly established Post-Graduate School of Medicine of the University of London at Hammersmith and he was especially interested in visiting the University of Virginia, the Medical College of Virginia, and Duke University.

An Appointment in Pediatrics

Is available immediately at Raiford Clinic, Franklin, Virginia. Address the Administrator, Raiford Memorial Hospital, Franklin, for further details. (*Adv.*)

Established Hospital for Lease.

A Sanitorium for nervous, mental, alcoholic and drug cases, doing an excellent business, to a reputable physician or medical group. Dr. E. W. Stokes, 923 Cherokee Road, Louisville 4, Kentucky. (*Adv.*)

For Sale

GE X-ray, Model 1775; 30 ma; 85 KVP, table with Bucky; in excellent working condition. James P. King, M. D., Radford, Virginia. (*Adv.*)

An Appointment in E. E. N. and T.

Available October 1, 1946, at Raiford Clinic, Franklin, Virginia. Address the Administrator, Raiford Memorial Hospital, Franklin, for details. (*Adv.*)

Positions Open.

There are two positions open for Industrial Practice on the Medical Staff of the Clinchfield Coal Corporation, Dante, Va. Phone collect, W. C. Elliott, M.D., Physician in Charge. (*Adv.*)

OBITUARIES

Dr. Thomas Bascon Ely,

Prominent Lee County physician, died at his home in Jonesville, May 6, after having been in bad health for several years and confined to his home for a year. He was a native of Lee County and sixty-four years of age. After attending Emory and Henry College, he studied medicine at the Medical College of Virginia from which he graduated in 1909. Upon completing an internship at Sarah Leigh Hospital in Norfolk, he located for practice at Jonesville. He was a member of his local, State and several other medical organizations, and was also an Odd Fellow, a Royal Arch Mason, and a member of the local Lions Club. In 1937 he was elected to the General Assembly of Virginia and served during the session beginning in 1938. Dr. Ely was medical officer for the local draft board in both World War I and II and took a keen interest in community affairs. He is survived by his wife, a son, Dr. Thomas S. Ely, grandson, two sisters and a brother.

Dr. Thomas Sheppard Richardson,

Retired physician of Waynesboro, died in Marlinton, W. Va., July the 6th, at the age of seventy-seven, and his burial was in the family plot in Bath County. After attending the Polytechnic Institute and Shenandoah Normal School, Dr. Richardson studied medicine at the former University College of Medicine, Richmond, getting his diploma in 1899. He went to Waynesboro that year and had a large practice in that community for more than forty years. He was school physician to Fairfax Hall for many years, and had served on the town council. He had been a member of the Medical Society of Virginia since 1900. His wife, and several brothers and sisters survive him.

Dr. Alexander L. Martin, Jr.,

Richmond, died on July the 17th after a long illness. He was forty-three years of age and a graduate of the Medical College of Virginia in the class of '28. Since then he had practiced in Richmond. He was a member of the Medical Society of Virginia, a thirty-second degree Mason, and a member of the Scottish Rite. His mother and a son survive him.

Dr. Homer E. Clarke

Died at his home at Massies Mill on May 31st, at the age of seventy-seven. After graduating from Miller Manual Training School, he attended the University of Maryland, Baltimore, from which he received his medical degree in 1901. Dr. Clarke practiced in Flint, Michigan, returning to Virginia upon retirement. He was a member of the Medical Society of Virginia. His wife and two daughters survive him.

William Harman Surber,

A member of the Medical Department of D. Appleton-Century Company for seventeen years and its Editor since 1939, died suddenly of a heart attack on July 16. He was 55 years of age. Mr. Surber, a native of Staunton, entered the publishing field with the Michie Publishing Company of Charlottesville, and shortly thereafter established his own firm, the Surber Publishing Company, with headquarters in Charlottesville. When this was wiped out by fire in 1929, he joined the staff of what was then D. Appleton & Company, and had become one of Appleton-Century's oldest and most valued staff members.

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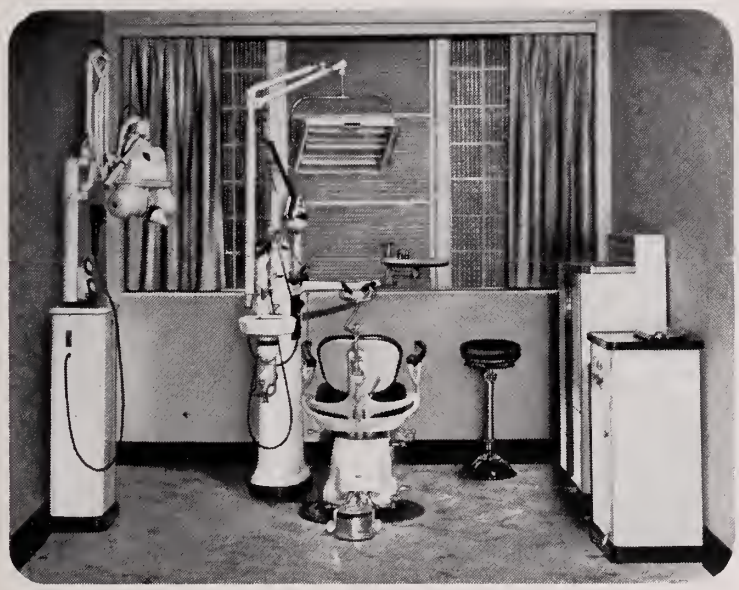

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Medical Society of Virginia
Virginia Beach—October 14, 15, 16

September 1946

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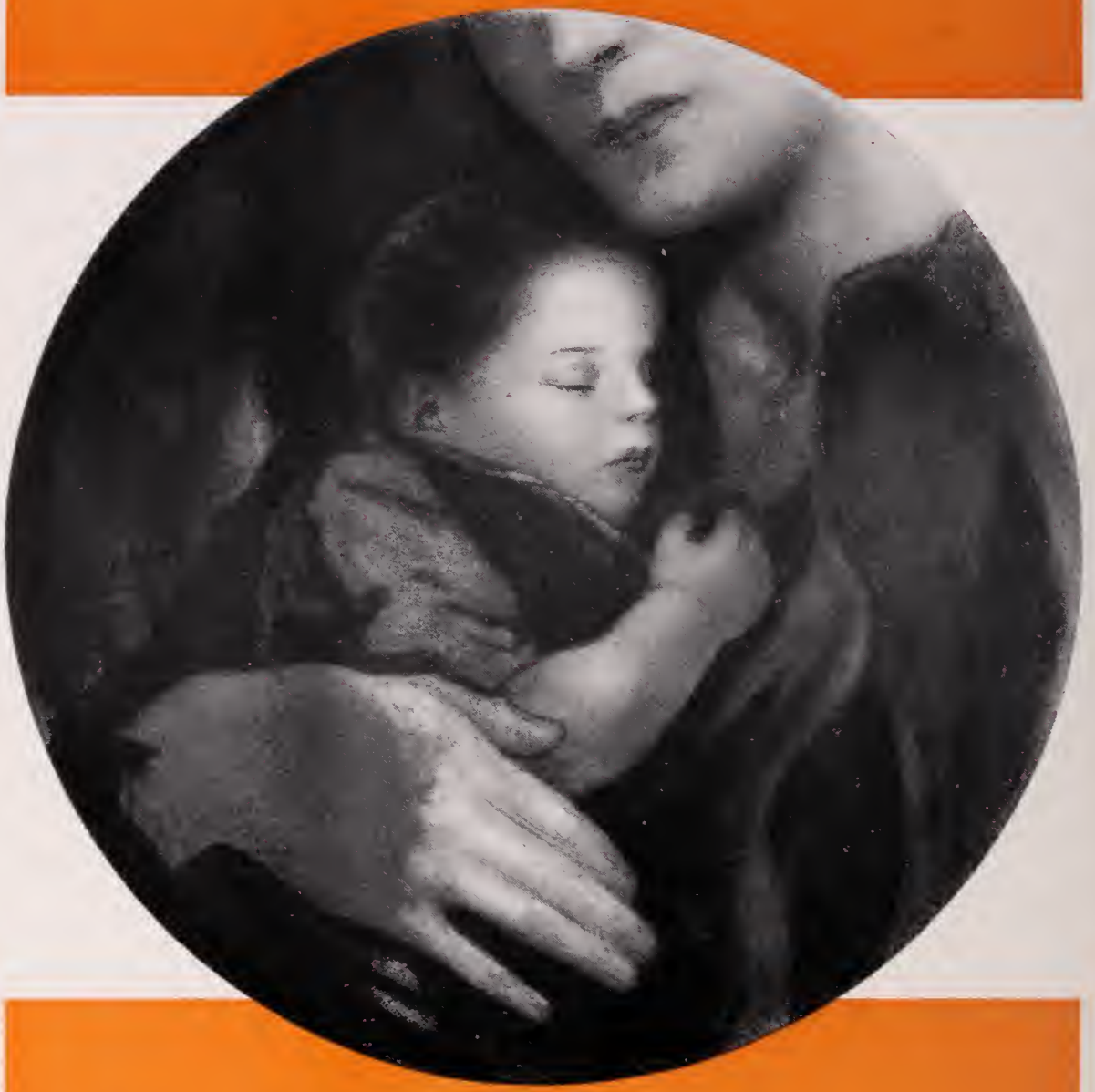

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ANNUAL MEETING (WALTER REED NIGHT) SECTION ON THE HISTORY OF MEDICINE RICHMOND ACADEMY OF MEDICINE MARCH 12, 1946

It is neither necessary nor possible to say what period of history is most significant. The James River, from its headwaters on down through the mountains and the Piedmont, is important to the health and industry of the City of Richmond. So it is with history, and in selecting for review the time dating roughly from the turn of the century, we at least have chosen a period of medical history that has never been surpassed in the rate and weight of its developments. Let any physician of forty years' experience compare his diagnostic and therapeutic procedure of today with that of yesterday.

Neither is it possible to say fairly who has made history. Every announcement of significant discovery is built upon the painstaking labors of many unsung workers gone before. But it cannot be far wrong to suppose that in the medical history of the last half-century, each award of the Nobel prize marks a worthy achievement, and for this reason a list of those awards was attached as a supplement to the program announcement.

In arranging for the speakers at the 1946 meeting of the Richmond Academy's Section on History, I counted myself fortunate in securing the cooperation of three erudite members, who accepted the invitation to present a chapter in modern medical history, each in the field of his special and active interest.

JAMES H. SMITH, *Chairman.*

NOBEL PRIZE WINNERS IN PHYSIOLOGY AND MEDICINE

1901

To EMIL VON BEHRING, for his work on serum therapy and particularly its use against diphtheria.

1902

To RONALD ROSS, for his work on malaria.

1903

To NIELS R. FINSEN, in recognition of his work on the treatment of diseases, and particularly lupus (lupus vulgaris) by means of concentrated radiation.

1904

To IVAN PETROWITCH PAWLOW, for his work on the physiology of digestion.

1905

To ROBERT KOCH, for his work on tuberculosis.

1906

To CAMILLO GOLGI and SANTIAGO RAMON Y CAJAL, for their work on the anatomy of the nervous system.

1907

To CHARLES LOUIS ALPHONSE LAVERAN, for his work on the role of the protozoa in the causation of diseases.

1908

To PAUL EHRLICH and ELIE METCHNIKOFF, for their work on immunity.

1909

To THEODORE KOCHER, for his work on the physiology, pathology and surgery of the thyroid gland.

1910

To ALBRECHT KOSSEL, for his work on the proteins, inclusive of the nuclear substances.

1911

To ALLVAR GULLSTRAND, for his work on ocular dioptrics.

1912

To ALEXIS CARREL, for his work on the suture of vessels and on the transplantation of vessels and of organs.

1913

To CHARLES RICHET, for his work on anaphylaxis.

1914

To ROBERT BARANY, for his work on the physiology and pathology of the vestibular mechanism.

1915-1918

the prize was not given.

1919

To JULES BORDET, for his discoveries relative to immunity.

1920

To AUGUST KROGH, for his discovery of the capillary motor mechanism, regulating the nutrition of the tissues.

1921

the prize was not given.

1922

Half to ARCHIBALD VIVIAN HILL for his discovery of the release of heat in muscular activity, and half to OTTO MEYERHOF for his discovery concerning the relationship between the consumption of oxygen and the metabolism of lactic acid in the muscles.

1923

To FREDERICK G. BANTING and JOHN JAMES RICHARD MACLEOD for the discovery of insulin.

1924

To WILLEM EINTHOVEN, for his discovery of the electrocardiogram.

1925

the prize was not given.

1926

To JOHANNES FIBIGER, for his discovery of spiropterien carcinome.

1927

To JULIUS WAGNER-JAUREGG, for his discovery of the therapeutic value of inoculation with malaria for general paralysis.

1928

To CHARLES NICOLLE, for his work on typhus fever.

1929

Half to CHRISTIAAN EIJKMAN for his discovery of the antineuritic vitamin and half to F. GOWLAND HOPKINS for the discovery of growth vitamins.

1930

To KARL LANDSTEINER, for his discovery of the various blood groups in the human species.

1931

To OTTO WARBURG, for his discovery of the respiratory ferment.

1932

To CHARLES SHERRINGTON and EDGAR DOUGLAS ADRIAN, for their discoveries on the function of the neuron.

1933

To THOMAS HUNT MORGAN, for his discoveries on the chromosome carriers of heredity.

1934

To GEORGE R. MINOT, WILLIAM P. MURPHY and GEORGE H. WHIPPLE, for their discoveries relative to the treatment of anemias with liver.

1935

To HANS SPEMANN, for the discovery of the effect of the organizer in embryonic development.

1936

To HENRY HALLETT DALE and OTTO LOEWI, for their discoveries relative to the chemical transmission of nerve impulses.

1937

To ALBERT V. SZENT-GYORGYI, for the discoveries relative to the biological oxidations and particularly on vitamin C, and the catalysis of fumaric acid.

1938

To CORNEILLE HEYMANS, for the discovery of the role of sino-carotid and cardio-aortic mechanisms for the regulation of the respiration.

1939

To GERHARD DOMAGK, for the discovery of the antibacterial action of prontosil.

1940-1942

the prize was not given.

1943

Half to HENRIK DAM for his discovery of vitamin K and half to EDWARD A. DOISY for his discovery of the chemical structure of vitamin K.

1944

To JOSEPH ERLANGER and HERBERT SPENCER GASSER for their discoveries on the various functional differentiations of nerve fibers.

A GLIMPSE AT THE DEVELOPMENT OF IMMUNOLOGY AND ALLERGY IN THE LIGHT OF THE CONTRIBUTION OF SIX NOBEL PRIZE WINNERS: VON BEHRING, RICHET, BORDET, METCHNIKOFF, LANDSTEINER, KOCH*

WYNDHAM B. BLANTON, M.D.,
Richmond, Virginia.

I shall attempt to trace briefly the development of immunologic knowledge, with particular reference to the work of six Nobel Prize Winners: Von Behring, Richet, Bordet, Metchnikoff, Landsteiner and Koch, with some attention to the relation of allergy to immunology.

Where shall we begin? With Mithradates protecting himself from poison, as Pliny relates, by taking daily doses of that same poison? With the Chinese practice of inoculation against smallpox 300 years before Christ? With the American Indian physicking his children prophylactically each spring with a decoction of poison ivy leaves? Or shall we begin nearer our own times, with Edward Jenner's successful vaccination of James Phipps in 1796, and the publication of his *Inquiry* in 1798?

Suppose we arbitrarily strike in with Pasteur. It is the year 1881. French sheep have been dying like flies from anthrax. Pasteur's great experiment is at the critical stage. Twenty-five sheep have been inoculated with his anthrax vaccine. Twenty-five controls are in an inclosure close by. To all a lethal dose of anthrax bacilli is given on May 31. Two days and the waiting period is over and the twenty-five unprotected sheep lie dead. The twenty-five vaccinated ones are still hale and hearty. That was the real birthday of the science of immunology.

Time moves on. Henry Sewall at Ann Arbor immunizes pigeons against snake venom. Albert Calmette prepares anti-venin. Pierre Roux discovers the toxin of the diphtheria bacillus and Emil Von Behring tries to duplicate Calmette's success. The meeting of the International Congress on Hygiene and Demography takes place in 1894. The place is Budapest, and Von Behring, a German and first winner of the Nobel Prize, electrifies his audience with the announcement that he has succeeded in making diphtheria antitoxin. He actually has on hand a little vial of antitoxin for those present to take home with them and try for themselves. Victor Vaughan, father of the late Warren Vaughan, is there. And back to America he comes, bringing the first antitoxin to be used here.

In all this time others were at work. Paul Ehrlich, chemist, discoverer of salvarsan, specialist in dyes and tissue stains, and the originator of the differential count and vital staining, was formulating his side chain theory and the concept of a foreign protein injuriously linking itself to the protein of the living cell. The link is shed; new receptors are manufactured—many such receptors. The foreign protein came to be spoken of as antigen; the receptors as antibodies, some fixed to the cells, others freely circulating. Thus stated, we have a large part of the mechanism of what is now called acquired resistance. With the events visualized in this way, immunologic study grew apace.

Jules Bordet, a Belgian, an eminent serologist, another Nobel Prize Winner, took a hand. He had discovered bacterial hemolysis and, with Gengou, the whooping cough bacillus and, in 1900, the principle of complement fixation. Bordet viewed immunity from a very different point of view from Ehrlich. To him, a physicist, the process was quite simple. For him no side chains, no chemical formulae—simple physics. Toxin, said Bordet, was neutralized by antitoxin by absorption in a manner similar to that by which a fabric takes up a dye. After saturation is complete it is assumed that toxin is unopposed in its injurious effects. It was as easy as that.

It is time to introduce another of our Nobel Prize Winners, Eli Metchnikoff, a Russian biologist, who was born just a hundred years ago and whose scientific life was spent in the Pasteur Institute. He had, in 1895, demonstrated Pfeiffer's phenomenon *in vitro* (bacteriolysis) and with Roux had successfully inoculated apes with syphilis. He is perhaps more familiar to this audience as the advocate of a once popular theory of old age—intestinal autointoxication, which he believed was to be combated by lactic acid; and for his advice to all those who would attain the dream of Ponce de Leon —that they must drink buttermilk. So doing, he himself attained an age none of his ancestors had reached. I well remember visiting his small untidy laboratory in the Pasteur Institute in 1915, just a little while before his death, to look upon tiers

*Read before the Richmond Academy of Medicine, Richmond, Va., March 12, 1946, under auspices of the History of Medicine Section.

and tiers of senescent rats and to be disappointed that the old man was too unwell that day to keep an engagement with a few American students. But Metchnikoff's contribution to immunologic knowledge lay elsewhere. He is the father of the solidist theory of immunity, for it must be remembered that he was the discoverer of phagocytosis, and on his experimental work rest largely our present ideas with reference to opsonins and the function of the white blood cell in the destruction of bacteria in the mechanism of resistance.

We are now in the thick of early immunologic investigation. Everybody was trying either to unearth a new phenomenon or to explain an old one. Flexner, Theobald Smith, Otto, Rosenau and Anderson, each made his contribution. In the course of their research each encountered and recorded a curious reaction—the observation that repeated doses of foreign protein, given parenterally to immunize animals occasionally killed them. No one knew why and no one had the curiosity to find out. But the solution was at hand, and a new department of science was gestating.

At this point we must introduce another recipient of the Nobel Award, Charles Richet, Frenchman and founder of the specialty of allergy. Like other scientists of his day, he was deep in immunologic research.

He was attempting to determine the toxic dose for dogs of an aqueous glycerine extract of the tentacles of actinaria, when an unforeseen event occurred—the death of dogs following a second injection of an amount of the extract which had proved harmless on the first injection. This led to a careful investigation of the cause. To quote Richet himself:

"The most typical experiment, that in which the results were indisputable, was carried out on a particularly healthy dog named 'Neptune.' He was given at first 0.1 cc. of the glycerine extract without becoming ill; twenty-two days later, as he was in perfect health I gave a second injection of the same amount. In a few seconds, he was extremely ill; breathing became difficult, and he was panting. He could scarcely drag himself along, lay on his side, was seized with diarrhea, vomited blood, sensibility diminished, and he died in twenty-five minutes.

So Neptune, like many another martyr, died that a new idea in science might be born.

In 1901 Richet explained his phenomenon, laying down its two cardinal features, first, that a substance, harmless on the initial injection, may on a subsequent injection, prove fatal; and, second, that a definite interval must elapse between injections. To this phenomenon he gave the now familiar name *anaphylaxis,* thinking that by his first dose he had destroyed something in the animal which protected it against the harmful effect of the poison in the first dose. Mind you, Richet was using highly toxic material. It remained for Arthus, a pupil of his, to show that a non-toxic substance, such as blood serum or milk could produce a similar reaction. It is to be recalled that anaphylaxis was a phenomenon of animals. That a similar mechanism was operative at times in the human body was soon to be set forth by Von Pirquet and Schick. In 1905, in a now famous monograph, *Die Serum Krankheit*, they described for the first time all the many clinical manifestations of serum sickness, and showed that here was a human disease exhibiting both of the features emphasized by Richet as essential in animal anaphylaxis (the harmless first dose and the incubation period). Von Pirquet then proposed a new name for Richet's misnomer. He sought an inclusive word, with ample latitude and so he suggested, to quote him, "the term allergy to designate this general concept of altered capacity to react." It is said that Richet, the discover, was much upset by the general acceptation of another's terminology for his phenomenon.

With the antigen-antibody theory and Von Pirquet's definition, there was now smooth sailing, but only for a short while. Friedberger, Wolff-Eisner, Doerr and Swift, all attempted to sensitize animals to non-proteins. The discovery was soon made that synthetic drugs such as phenolphthalein, arsphenamine, quinine, phenobarbital, and, recently, the sulphonamides were capable of sensitizing the human body. A single aspirin tablet was reported as the cause of sudden death in an aspirin sensitive individual. What was the mechanism? The old protein theory did not suffice, but in 1924 another recipient of the Nobel Prize solved the problem by proving experimentally that by the conjugation of a chemical and a protein (azoprotein) a new antigen was formed capable of stimulating antibody formation, and that thereafter this chemical alone was able to provoke the allergic response in sensitized tissue. This haptin theory we owe to Karl Landsteiner, better known to most of us here tonight, perhaps, as the discoverer of the blood groups which now play such an important role in human transfusions.

The immunologist and the allergist were not

through with their difficulties. Duke introduced in 1924 the concept of physical allergy—a woman so sensitive to light as not to be able to go out of doors without a black veil; a man so sensitive to cold as to hold his life in jeopardy every winter from laryngeal edema and asthma. Still another explanation had to be found. Fortunately at this time Lewis and his co-workers reported the results of their elaborate experiments. He showed that histamine (or, as he cautiously called it, H-substance), a natural constituent of most cells, is released by any one of a number of cellular insults. Such insults might be mechanical, electrical, chemical, thermal, or the antigen-antibody reaction itself. The injection of histamine parenterally into an animal—into the guinea pig, for example—so exactly simulated anaphylactic shock, that not only was histamine regarded as one of the important factors in this reaction, but it thereafter assumed a major role in the explanation of the whole allergic response. Lewis wrote: "The similarity between the histamine reactions and the anaphylactic phenomenon . . . is abundantly clear; it is so clear that a single fundamental cause must inevitably be postulated to explain the two." From this time on the majority of allergies explained the allergic response as a histamine effect, the histamine being liberated in the case of atopic diseases by antigen-antibody reaction; in the case of drug allergy by a haptin antibody reaction; and, in the case of physical allergy, by a direct stimulation of sensitized cells.

If now, for a moment, we should follow the stream of allergy as it has widened in the last forty years since Richet and Von Pirquet, we must take account of *seasonal hay fever,* first recognized as an allergic disease by Wolff-Eisner in 1906; and of *asthma,* first thought of as belonging in the same class by Meltzer in 1910; of *gastro-intestinal anaphylaxis,* described in 1914 in a monograph by Laroche, Richet and St. Girons; of sensitization in *dermatology;* of J. Jadassohn's and Bruno Bloch's early use of the *patch test;* and the recognition of the allergic nature of *contact dermatitis* and *atopic dermatitis,* as well as certain of the eczemas, and finally, the widening application of the allergic theory to diseases of the *nose,* the *eyes,* the *kidneys, cardiovascular disease,* and such disturbances in the domain of *neurology* as *epilepsy, migraine, Ménière's disease,* and some transient *paralyses.*

This brings us to the last of our distinguished Prize Winners—Robert Koch, a German country doctor, who turned to the microscope to give us the life history of the anthrax bacillus, perfected the culture and staining of bacteria, enunciated some famous postulates, discovered the tubercle bacillus, and, in 1890, introduced tuberculin. Here is where he touches immunity and allergy. "The hypersensitivity of the tuberculous animal to tubercle bacilli and products of tubercle bacilli", wrote Zinsser, "is the best known, most typical and most extensively investigated of all the instances of allergy to bacteria and bacterial products. Nevertheless, neither the mechanism of the reaction nor its significance with respect to resistance or susceptibility of an animal to tuberculosis has been definitely determined." Bacterial allergy, of which tuberculosis is such a classic example, is the *bête noir* of the allergist. Only one phase of the subject, however, need detain us now. What is the relation of allergy to immunity? Bret Ratner has recently expressed one viewpoint—stated simply, allergy is the first stage of immunity. During this stage antibody is made by the cells and remains fixed. The second stage begins when sufficient antibodies have been manufactured to overflow into the blood as circulating agents of protection. The situation is not static, for an animal may be first allergic, then allergic and immune and later only allergic. For years most authorities held that allergy is essential to the process of protection and that allergic inflammation is a rapid and effective method of arresting bacterial invasion. In this company were Victor Vaughan, Krause, Opie, Zinsser, Calmette and Hamburger.

The other point of view, that allergy, far from being helpful, is a hazard to the individual, was recently put forth by Arnold Rich in an exhaustive study, *The Pathogenesis of Tuberculosis.* His position seems to be gaining ground. In support of it, he reminds us that there is no correlation between the degree of hypersensitivity and the degree of acquired resistance, that hypersensitive inflammation is not protective *per se* and that specifically acquired resistance may effectively inhibit bacterial spread in the absence of hypersensitive inflammation. He puts it bluntly: "There never has been placed on record one single experiment or clinical observation that demonstrated that hypersensitivity is necessary to protection in any stage of tuberculosis or any other infection, under any conditions whatever," and hypersensitivity and allergy are synonymous.

HISTORICAL ASPECTS OF INFECTIOUS DISEASES*

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Obviously, it is impossible to review here the complete history of the development of our present knowledge of the infectious diseases, but we shall attempt to lay before you those changes which have occurred in the past fifty years or so, with special attention to the work of the men who have been rewarded by the Nobel prize. In doing so, it is hoped that your attention will be directed to the broad aspects of the problem, that is, to the channels in which medical thinking has flowed from time to time.

Hooper's Medical Dictionary, for the year 1860, gives this definition of contagion: "From the Latin, *contango,* to meet or touch each other. This word properly imports the application of any poisonous matter to the body, through the medium of touch. It is applied to those very subtle particles arising from putrid substances, or from persons laboring under certain diseases, which communicate the diseases to others—as the contagion of putrid fevers, the effluvia of dead animals or vegetable substances, the miasmata of bogs and fens, the virus of small-pox, lues, etc."

It is obvious from this definition that the true nature of those subtle particles we now know as bacteria, protozoa, etc., and their connection with the contagious diseases were not understood. In fact, the question of spontaneous generation was still being argued, as it had been since the time of Anaximander of Miletus, 610 B.C., and Aristotle, 384 B.C. This bugbear was finally laid to rest through the experiments of Tyndall in the 1870's, plus the arguments advanced during the preceding two hundred years by Redi, 1668, Leuwenhoek, 1675, Plencig, 1762, Spallanzani, 1777, Schultze, 1836, Schwann, 1837, Pasteur, 1862, and others.

Despite this lack of concrete knowledge about the infecting agent, the fact that some such agent must exist had been postulated by Henle in 1821. Holmes, in 1843, and Semmelweis, in 1847, had shown that puerperal sepsis was caused by some foreign agent which was carried from an autopsy on a "putrid" case, and could be removed by washing the hands and cleaning the instruments. In the years after 1850, the work of Pasteur on fermentation, plant diseases, and anthrax added great weight to this hypothesis. Also, Davaine, in 1863, demonstrated that anthrax was transmissible, and Villemin and Cohnheim had shown that tuberculosis could be produced by the injection into animals of material from a tuberculous patient; in 1866, Lister, using a German chemical, bichloride of mercury, had shown the value of surgical antisepsis. In 1873, Obermeier saw minute spiral bodies in the blood of sufferers from relapsing fever. Thus, it may be said that the scientific mind was gradually grasping the fact that some living contagion passed from person to person was responsible for the diseases we have under consideration. Handicapped by poor microscopes, inadequate culture methods, and a lack of staining technique, they were unable to get at those very subtle particles, yet they knew they must be there. In this connection, we are reminded of Harvey, who *was not the first* to show that the blood must be passing from the heart through the arteries to the veins and back to the heart. He was confounded as to the route by which it got from artery to vein as he could not demonstrate the capillaries with the apparatus available. These were finally seen by Malpighi in 1660, three years after Harvey's death.

Clinically, the physician was surrounded by fevers, constant, remittent, intermittent, bilious, jail, yellow, and others. Therapeutically, he was a real individualist, each man having his own pet concoction for each particular fever.

Among the students of these problems was Ferdinand Cohn, of Breslau, one of the foremost investigators of bacteria and the first to conclude that they were minute plants. In April, 1876, Professor Cohn received a letter:

"Esteemed Herr Professor:

"Stimulated by your work on bacteria published in contributions to Biology of Plants, I have for some time been at work on investigations of anthrax contagion, as I was able to secure the necessary material. After many vain attempts, I have finally

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been successful in discovering the process of development of the bacillus anthracis. After many experiments, I believe myself able to state the result of these researches with sufficient certainty. Before, however, I bring this into the open, I respectfully appeal to you, esteemed Herr Professor, as the foremost authority on bacteria to give me your judgment regarding this discovery. Unfortunately, I am unable to prove this by means of preparations containing the individual stages of development, as the attempt to conserve the bacteria in the respective fluids has failed. I would, therefore, respectfully request you to permit me to show you, within the next few days in the Botanical Institute, the essential experiments. Should you, highly esteemed Herr Professor, be willing to grant my humble request, will you kindly appoint the time when I may come to Breslau."

Professor Cohn was not particularly excited by this letter, as many had previously claimed to have solved the perplexing problems of bacterial growth, development, and relation to disease. However, the appointment was made and on that day, there appeared a small, bearded fellow, shy and of unprepossessing appearance. This doctor began to outline the work he had carried on in his kitchen amid the trials and tribulations of a country practice. Hardly had he begun his demonstration before the Professor realized that epoch-making discoveries had been made, and he sent for his students, Klebs, Loeffler, Auerbach, Traube, Weigert and Cohnheim to hear and see the presentation.

This country doctor was Robert Koch, who laid down and established the dicta suggested first by Henle and known since as Koch's Postulates; who discovered the tubercle bacillus; the poured plate method of culturing bacteria; the cholera bacillus; the typhoid bacillus; who was the father of modern bacteriology and winner of the Nobel prize in 1905.

Dr. Koch's postulates and methods in general were rapidly accepted on the continent, but seem to have caused little excitement among the English, and practically none in this country. Reading over the *Lancet* for the year 1882, one finds a brief note on his description of the tubercle bacillus. Also, we see various letters and articles arguing against the notion of contagium vivum. In this country, Trudeau and a few others grasped the significance of his work and began to study sputum in suspected cases of tuberculosis.

It is interesting that progress is made by adding a little from this brain and a little from that one. Even with Koch's methods and culture media, knowledge of bacteria would have advanced but slowly without the staining methods developed by Weigert between 1871 and 1875.

In this connection, Leeson, a student of Lister's, tells how that great physician became convinced from reading Pasteur's work that the infection so common in compound fractures and so rare in simple ones must be due to some outside agent. This thought came to him late one night, so he hurried to the hospital, removed the dressings from such a case, smeared a slide with the "laudable pus," and put it under the microscope, but saw nothing but the usual debris. If only he had had the stains developed by Weigert ten years later, and the microscopes we all have now, think of how many lives would have been saved, how many arguments would have been avoided, and how many pages of medical journals could have been devoted to other, perhaps, more useless writings.

In the years following Koch's discoveries, scientists everywhere were feverishly engaged in investigating the living causes of infectious diseases. These studies were most admirably rewarded by the discovery of the specific cause of leprosy by Hansen and Neisser in 1879; of gonorrhea by Neisser in 1879; of lobar pneumonia by Pasteur and Sternberg in 1880; of typhoid fever by Eberth and Koch in 1880; of malaria by Laveran in 1880; of tuberculosis by Koch in 1882; of diphtheria by Klebs in 1884; of gas gangrene by Nuttall and Welch in 1892; of plague by Kitasato and Yersin in 1894; of dysentery by Shiga in 1897; and many others.

These studies of bacteria led to the study of other microscopic organisms and their life cycles. In 1879, Manson had followed filaria through the mosquito and contended that this insect carried the disease. Such a notion gained little support, and he was known in the Orient as "Crazy Pat Manson". In 1891, Smith showed that Texas fever was carried by ticks. Ross, following Manson's work on filariasis, was able to show, in 1897, that mosquitoes were necessary for the life cycle of Laveran's plasmodium and were the carriers of malaria. Ross' work was rewarded by the Nobel prize in 1902, and Laveran

received this prize in 1907. In 1898, Simond showed that plague was carried by fleas; in 1900, Reed, Lazear, and others, following in Finlay's steps, found that yellow fever was carried by mosquitoes; in 1902, Dutton and Sambon showed the connection between African sleeping sickness and the tsetse fly.

As these etiological studies advanced, much work was being done on the effect of these infectious agents on the human body and its response to them. In 1796, Jenner had shown that inoculation with cowpox generated some reaction which protected against smallpox. In 1880 Pasteur, while he was on vacation, accidentally, if such a word can ever be applied to such a man, discovered the principle of attenuation of virus when certain cultures of chicken cholera became incapable of producing the disease, and, yet, when injected, they gave protection against other virulent cultures. Based on this discovery, he developed his vaccine against anthrax, of inestimable value to the sheep industry; and, in 1885, carried this principle into medicine when he produced an attenuated rabies virus which would protect those bitten by mad animals. In 1888, Brieger isolated the toxin of certain bacteria, showing that they generated a poisonous substance which was separate from the bacteria themselves. Using these poisonous substances, or toxins, von Behring, in 1890, found that their injection into animals resulted in the formation of a substance he called an antitoxin, which was present in the blood serum of these animals so that the injection of this serum would protect another animal or person against subsequent infection by the bacteria which produced the toxin. He received the Nobel prize in 1901. In 1896, Widal discovered that infection by bacteria, such as the typhoid bacillus, produced a substance in the serum which would clump these bacteria.

In the early years of the twentieth century, we find, then, that the animate causes of many diseases were known; that their life cycle and mode of transmission had been clarified in many instances; and that their effects an animals and man had been investigated.

During the next two decades, the etiological studies continued with the discovery that rat fleas carried the plague by Verjbitski and Liston in 1903 and 1904; of spirocheta pallida as the cause of syphilis by Schaudinn and Hoffman in 1905; of the bacillus pertussis as the cause of whooping cough by Bordet and Jengou in 1906; that ticks carried Rocky Mountain spotted fever by Ricketts in 1906; and the body louse, typhus, by the same observer in 1910. During this period, however, the greatest activity centered around the application of this new knowledge to the prevention and cure of disease.

The public health field was completely rejuvenated. Prior to the '80s, sanitation authorities had been chiefly concerned with two problems: one, the quarantine and isolation of ill individuals to prevent the spread of contagious disease; and, the other, the disposal of filth, the chief concern being anything which had a bad odor, as such odors were thought to be the source of contagion. The bacteriological discoveries made it clear that the danger lay in the bacterial content and that the most sparkling water, the most delicious milk, even the air itself might, and frequently did, contain the cause of some dread disease. Based on these studies, city filtration and chlorination plants developed so that, in 1911, 20 per cent of the urban population of the U. S. was using filtered water as compared with 6 per cent in 1900. The American Public Health Association standardized the examination of milk in 1910, and carried out studies on the air which were first reported at a meeting here in Richmond in 1909.

From von Behring's original investigations on toxins and antitoxins, and Ehrlich's development of the side-chain theory, vaccines and anti-sera came into use for mass prevention and the treatment of individual sufferers. Thus, the U. S. Army Second Division on maneuvers in Florida in 1898, with 10,759 men had 1,729 cases of typhoid fever and 248 deaths; in 1911, following inoculation with anti-typhoid vaccine, this division with 12,801 men had one case of typhoid. Going hand in hand was the development of diagnostic laboratory work, such as the complement fixation test for syphilis by Wassermann in 1907, and the general use of Widal's bacterial agglutination discovery in the diagnosis of typhoid and other fevers. In like manner, the diagnostic skin tests were developed. More careful clinical study made possible the identification of atypical cases of various diseases, and, more importantly, drew attention to the "carrier", that is, the person who harbors the germs without himself suffering from the disease. In 1884, Loeffler, in his original

paper on diphtheria, had reported such a case; but the immense significance of the carrier state to disease prevention was not clearly realized until the early 1900s.

Shortly before 1910, Ehrlich became convinced that protozoan diseases would not yield to any vaccine or serum approach and began the search for some chemical which would kill the parasite without killing the host. Through a long series of experiments, he and his student, Hata, discovered that the 606th preparation tried, Salvarsan, was effective against the spirochete of syphilis. Here we see the birth of clinical chemotherapy.

As these advances took place and were consolidated in the public health field, clinical practice, laboratory investigation, and therapy, there occurred the first World War, an unexcelled experimental opportunity to investigate their value. The results need no repetition here.

Since World War I, the public health and prevention idea has progressed by leaps and bounds. For example, let us consider our own state. Although a state board of health was created by the General Assembly in 1872, making Virginia the third state in the union to have such a board, it seems to have functioned but little until 1900, when a salaried secretary was provided and an appropriation not to exceed $5,000 per annum was made. In 1908, the membership of the board was increased from seven to twelve and a commissioner, Dr. Ennion G. Williams, was appointed. The total annual allotment was $40,000. In 1945, the health department was divided into eleven departments or bureaux, employing 454 persons and having a budget of over two and a half million dollars.

In the clinical field, much effort was expended on the development of vaccine and sera, such as anti-pneumococcus serum. Chemo-therapy was expanded with the introduction of various preparations of arsenic and bismuth, useful particularly in syphilis and seemingly having specific effects in certain clinical forms of this disease; of emetine, acetarsone, chiniofon, and vioform in amebic dysentery; of atabrine and plasmochin in malaria; and tartar emetic and fuadin in granuloma inguinale. (Parenthetically, it may be stated that all these drugs left something to be desired.)

To introduce the next great advance, it is necessary to revert to the year 1908, when Gelmo synthesized para amino benzene sulfonamide. In the following year, chemists of the I. G. Farbin Industrie prepared azo dyes with sulfonamide. These preparations were used only as dyes until 1913, when Eisenberg noted that chyrsoidine was bactericidal in vitro. Subsequent to this, Zeide synthesized pyridium which was introduced as a urinary antiseptic. In 1919, Heidelberger and Jacobs developed a number of similar dyes and noted that many of them were highly bactericidal in vitro. During the next few years, the I. G. Farben chemists investigated the therapeutic effects of many preparations of gold, antimony, arsenic and tin with negative results. Early in 1930, Mietzsch, while working toward the synthesis of atabrine which he later accomplished, noted that one sulfonamide preparation was quite effective in the control of experimental streptococcal infections. In 1932, Mietzsch and Klarer patented prontosil, and in 1935, Domagk's controlled animal experiments showed conclusively that this drug was effective against the streptococcus. This work was particularly remarkable in that 100 per cent of the treated animals survived, and gained the Nobel prize in 1939. This report loosed a deluge of chemotherapeutic activity on the continent and in England, but for some reason aroused no particular interest in the U. S., as search of the *Journal of the American Medical Association* in 1935, shows no reference to it. In 1936, however, stimulated by the reports of Colebrook and Kenny in England, American study of these drugs began. Their progress thereafter in this country and abroad is well known to all, but one can scarcely refrain from calling attention to certain specific instances of the effect of the advent of the sulfonamides. Consider lobar pneumonia in Richmond prior to 1940. When confronted by a suspected case, one had little trouble with the diagnosis, made relatively easily by the application of well-tried clinical procedures, the bacteriological methods developed as indicated above, and Professor Roentgen's rays. The family was advised of this dread diagnosis, the patient hospitalized, and nurses engaged (matters requiring no great tact or friends at court in those halcyon days). Oxygen was held in readiness, and one considered the advisability of administering serum, often seemingly more dangerous than the disease, and of doubtful value. The anxiety of the physician and family, faced with a mortality of some 25 per cent as they awaited the hoped for crisis, can now scarcely be appreciated. Turn to the management of this same

problem with Whitby's sulfapyridine. The preliminaries were the same, but in twenty-four to forty-eight hours there occurred an apparent crisis with gradual and uneventful recovery. The family and physician could go home at night and rest peacefully. The mortality fell from 25 per cent to 4 per cent, statistically scarcely more dangerous than crossing the street. Truly this was a miraculous innovation.

This new slant on therapeutics set off a world-wide search for other bactericidal agents, and in this search, Fleming's experiments in London came to light. Here we recount another of those so-called accidents of science. In 1928 or 1929, Dr. Fleming was studying the possible mutations of the staphylococcus and growing it on various media. In so doing, some of his culture plates, poured by Koch's methods in Petri's dishes, became contaminated with mold; ordinarily such cultures would be discarded, but *these were not,* and Dr. Fleming noticed that the staphylococci in the neighborhood of the mold seemed to be dissolving. He obtained pure cultures of this mold and found that it generated some substance which would diffuse through agar and kill bacteria. Also, this substance, which he called penicillin since it came from the mold penicillium, was bactericidal in a dilution of 1-1000, as compared with carbolic acid which did not inhibit bacterial growth in a dilution of 1-400. Efforts to extract this substance in stable form or produce it in great quantity failed, so that this work lay neglected until 1938, when Florey and Chain, stimulated by the discovery of the sulfonamides, studied the effects of penicillin on infections in animals. From Florey's cultures, investigations in this country added mass production and greater yields. The benefits of this discovery need not be reviewed.

To sum up, then, we have attempted to sketch briefly the recent history of the infectious diseases. We have indicated three major directions of scientific thought: first, toward the discovery of bacteria and their relation to disease from about 1850 to 1910; second, in the application of these discoveries to public and private health from about 1900 to the present; and, third, the development of chemotherapy begun by Erhlich in 1910, and continued by Domagk in 1935, and Florey in 1938. Happily, this last field has not been exhausted.

In reviewing the material necessary for this presentation, one is struck by the advances begun in the nineteenth century. This period saw the first steps toward the intelligent care of the insane, the first attention to conditions of housing and nutrition, and the first child labor laws. During this time, the nursing profession began its rise from the beginnings laid by Miss Nightingale. It must not be forgotten that Professor Roentgen first saw the effects of the x-ray in 1895, and that Trudeau began our present treatment of pulmonary tuberculosis during this period.

It would not be proper in such an address to omit mention of those who died while investigating these diseases: Daniel A. Carrion from verruca peruana; Jesse W. Lazear and Walter Meyers from yellow fever; Alexandre Yersin and Hermann F. Muller from bubonic plague; Tito Carbone from Malta fever; Louis Ferdinand Thuillier from Asiatic cholera; Allen MacFayden from typhoid and Malta fevers; J. Everett Dutton from African relapsing fever; Howard T. Ricketts and James Francis Coneffe from typhus fever; Thomas B. McClintock from Rocky Mountain spotted fever; and Hideyo Noguchi from yellow fever.

In closing, we may permit ourselves certain random observations concerning the infectious diseases. We note the trend from individual research, as exemplified by Koch, to group study as undertaken by the National Research Council, and the introduction of government funds into these problems, a tendency, unwise perhaps, to smother individuality under bureaucratic controls. We wonder what discoveries will follow the broader use of the electron microscope which makes the pneumococcus look larger than a red cell. No doubt these added powers of magnification will show us minute organisms, living on bacteria just as bacteria live on us. The possibilities here are infinite. We do not wonder so much whether we should disclose the secret of atomic energy to some other nation, as whether it might not be well to disclose it to scientists in such a way that some now unknown student may apply it to the solution of problems of disease.

Lastly, in view of our very recent and present troubles, we have been impressed, as perhaps you have, by the fact that among mankind's greatest benefactors, occur the German names Koch, von Behring, and Ehrlich, and the Japanese ones, Kitasato, Shiga and Noguchi.

DR. WILLIAM S. HALSTED*

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If you will read over the list of Nobel prize winners given you this evening you will find that your surgical speaker has been given a difficult assignment if he attempts to stay within the limits outlined by tonight's program. Only two surgeons have received the Nobel prize—Theador Kocher, of Berne, Switzerland, and Alexis Carrell, late of Vichy, France. No English speaking surgeon, not even Joseph Lister, father of antisepsis, has received this honor. Rather than attempt to tell you why either Kocher or Carrell was chosen, I wish instead to describe briefly the career of one American surgeon and in so doing tell you why I think he should have been the recipient of this honor.

William Stewart Halsted was born in New York on September 23, 1852. He attended Andover and Yale before entering the College of Physicians and Surgeons where he received his medical degree in 1877. The following year was spent as house officer in the New York Hospital. He is chiefly remembered during this period for having devised the graphic temperature chart, which has now come into universal use. The next two years were spent in visiting European medical centers. This was a propitious time for a young surgeon to go abroad, for German medicine was then at its best and the field of surgery was being rapidly widened by the application of Lister's teachings in antisepsis. During his stay in Germany he saw much of the pioneer work then being done by Billroth, Wolfler, Von Bergmann, Volkmann, Schede, Esmarch and Mikulicz.

Upon his return to New York in 1880, he was made an associate surgeon at the Roosevelt Hospital and a teacher of anatomy in the College of Physicians and Surgeons. He brought much of the current German concept of antisepsis and early asepsis back with him and he, more than any other American surgeon, modified and then introduced asepsis to this country. About this time he invented the gutta percha protective tissue dressing. This logically led him to devise the present cigarette drain which soon supplanted the dry gauze pack which was formerly universally used. His studies in anatomy at this time lay the ground work for his later operative repair of hernia and his radical amputation for carcinoma of the breast.

His surgery during this era was described as being rapid, brilliant and daring, attributes which he later minimized during his teaching days in Baltimore. A pathologist at nearby Bellevue Medical College, William H. Welch, saw much of Dr. Halsted during this period and was impressed by the young surgeon's originality and skill. A friendship developed which was destined to influence Dr. Halsted's entire life.

W. H. Welch, W. S. Halsted, William Osler, H A. Kelly.
(The Sargent Portrait.)

During the winter of 1884-85 Dr. Halsted heard of the discovery by Koller that a little known drug, named cocaine, when placed in the eye would anesthetize the surface of this organ. He and several younger associates experimented upon themselves with this new agent by injecting it subcutaneously and into sensory nerves in order to determine its

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action. They found what is now sometimes called "Halsted's Law", namely, that a cocaine solution, if injected into a sensory nerve, will produce surgical anesthesia throughout the distribution of that nerve. This, of course, is the basis of all regional and spinal anesthesia as used today. Unfortunately, they did not discover until too late in their experiments that cocaine is probably the most powerful of all habit forming drugs. Each member of this small group became addicted to its use and several died as a result. As far as can be determined Dr. Halsted was the only one who was able to overcome this condition and this required the greater part of two years—most of this time being spent under institutional treatment.

During this critical period in his life an institution was taking shape in Baltimore which was to profoundly influence the course of medical teaching in this country. The Johns Hopkins Hospital and Medical School was nearing completion and Dr. Welch was given the task of choosing its staff. He knew of Dr. Halsted's illness and, in fact, had treated him professionally during this time, but his faith in his friend was such that he recommended that he be appointed surgeon-in-chief.

Dr. Halsted's career as professor of surgery is probably familiar to many of you. Several doctors in the audience tonight received their surgical instruction from him and are far better qualified to discuss his life than the speaker. His interests were so diversified and his contributions so many that I will touch on only a few of them.

His early work at Hopkins dealt chiefly with wound healing and the physiology of the thyroid and parathyroids. In New York his operating had been characterized by rapidity and dexterity. In Baltimore he operated slowly, deliberately and anatomically. Every bleeding point was clamped by a small mosquito hemostat and transfixed before it was ligated. His average operating time in a radical amputation of the breast was four hours and it is said that his assistants took care that their operations required no less time lest the professor take them to task for doing an incomplete procedure. His principles for the use of non-absorbable suture material and his emphasis on gentleness in the handling of tissues formed the cornerstone on which our present conception of wound healing rests.

The present operation for goitre is based on the procedure he evolved and described, in which is probably his best known monograph entitled "The Operative Story of Goitre." Technically there has been nothing added to the operation as he did it forty years ago. The medical handling of these cases has been greatly improved, and when it is considered that his cases were done prior to the advent of iodine, thiouracil, oxygen, or any of the other aids to present day thyroid surgery his results are all the more remarkable.

Shortly after coming to Baltimore the new professor of surgery introduced the use of rubber gloves during operations, today the hallmark of every surgeon. Superficially this may appear to be his greatest contribution, but he treated it so casually that the only reference to it that can be found in his writings appeared in 1913, twenty-three years later. Instruments and equipment of various types were devised by Dr. Halsted who had a happy faculty for fulfilling his needs by mechanical aids. Glass spools for silk, the present mosquito hemostats, a suture hammer to facilitate the closure of openings into the common duct, a thyroid retractor which is still in daily use, and a malleable band for the gradual occlusion of great vessels were designed by him, to mention only a few. We, in the Academy, are fortunate to have the first operating table designed and used by him during the era I am describing. By present standards it appears rather primitive but it served its time and generation well and dates the period when he was making his very modern contributions to surgery.

The first decade after his arrival in Baltimore found him writing much about hernia and carcinoma of the breast. The operative repair of hernia prior to 1890 had been a discouraging chapter in surgery. Dr. Halsted, basing his operation on his anatomical dissections made during the New York days, described in 1889 what is now know as the Halsted I repair for inguinal hernia. The procedure, though curative, was more radical than was necessary in the average case and he soon modified it to its present form. The Halsted repair of hernia is the only instance in which his honors were shared with another surgeon, for Bassini of Italy simultaneously described his operation for hernia and all present day procedures are based on the Bassini-Halsted technic. During a recent sojourn in the Middle West I was interested to find that the Halsted I repair which was discarded by

the originator about 1895 is frequently performed today west of the Mississippi.

In 1895 Dr. Halsted published his first paper on his radical operation for cancer of the breast. This described the technic for what has since become the standard operation for this condition and summarized his results. Prior to this time it was often said that "Cancer of the breast is operated upon, but not cured." The usual treatment in the eighties was a simple mastectomy with the removal of a little of the underlying fascia. The pectoral muscles and lymph nodes in the axilla were not disturbed. Dr. Agnew, professor of surgery at the University of Pennsylvania, stated about this time that he "had never been able to cure a cancer of the breast by operation or by other means." While occasional three and even five year cures were reported, the outlook in cancer of the breast was virtually hopeless and this had a correspondingly discouraging effect on efforts to cure cancer in more deeply situated parts. Dr. Halsted, by means of his block dissection of the breast and tributary areas was able to show apparent freedom from recurrence in 42% of all patients operated upon three years or longer. When it is considered that radiation therapy was then unheard of, the results he obtained from surgery alone compare favorably with those of today. The publication of these figures not only stimulated other surgeons to attempt to duplicate his results but also gave fresh hope as to the curability of cancer elsewhere.

The question of intestinal surgery interested Dr. Halsted throughout his professional life. Some of his earliest experimental work at Johns Hopkins was on this subject, and one of his final articles was devoted to a method of aseptic anastomosis which he devised shortly before his death. He was the first to point out the importance of the submucosa whenever intestinal anastomosis was done and the Halsted mattress suture which he introduced is still the most generally used method of reinforcing intestinal suture lines.

He probably saved the hardest problem for the last, for his death in 1922 interrupted his experimental and clinical studies on surgery of blood vessels and treatment of aneurysms. Limitations of time prevent more than a passing mention of his common duct and gallbladder surgery, or his work on osteomyelitis and fractures or transplantation of the parathyroids. His last years at Hopkins in some respects resembled his early days there before the hospital was in operation, for he spent more and more time in the Hunterian Laboratory working out technics which he then turned over to his residents who gave them the test of clinical trial.

It may sound to my listeners that I ascribe all the advances made in surgery during the years 1880 to 1920 to Dr. Halsted. That is not my intention, but the more one reviews his work the harder it is to say that this, or that, is a phase of surgery to which Dr. Halsted did not contribute. He did little in the fields of neurosurgery or urology, but, on the other hand, he suggested to Dr. Cushing that he specialize in neurosurgery and he appointed Dr. Hugh Young as urologist while these men were still on the resident staff, and the pioneer work done by them in their respective specialties stemmed directly from his teachings.

In the final analysis his greatest achievement lay in his choice of his assistants. No teacher of surgery could point to more illustrious disciples than could Dr. Halsted. These included Dr. Finney of Baltimore, Dr. Cushing of Harvard, Dr. Heuer of Cornell, Dr. Reid of Cincinnati, Drs. Holman and Reichert of Leland Stanford, Dr. Watts of the University of Virginia, Dr. McClure of Detroit, Dr. Miller of Pittsburgh, and most recently Dr. Hart of Duke. All of these men with the exception of Dr. McClure became professor of surgery and carried on the Halsted tradition in their respective schools.

Thus far I have spoken of Dr. Halsted as a surgeon, but this account would be incomplete if I did not tell you something of Dr. Halsted as an individual. The originality which characterized his professional life carried over into his private life and took the form of eccentricities which amused or disconcerted his associates as the circumstances determined. Dr. Halsted, unlike his medical counterpart, Dr. Osler, did not have the happy faculty of making friends easily, and his tongue, which veered to the acid side on occasions, discouraged familiarity on the part of his associates. He was admired and respected but he did not inspire affection and his circle of friends was small. He was always faultlessly attired and the high silk hat which he habitually wore became an institution in Baltimore. Early in life he learned that American laundries were unreliable and he had his white shirts washed and ironed in Paris. His shoes also came from Paris and he

chose the leather from which they were made with such care that he could detect and discard any substitution the bootmaker might attempt.

Romance entered his life shortly after his arrival in Baltimore. The chief operating room nurse was Miss Caroline Hampton of South Carolina. She was a niece of General Wade Hampton and a daughter of Colonel Frank Hampton. Her mother died when she was four and her father was killed in the battle of Brandy Station one year later. The following year "Millwood," her home near Columbia, was burned by Sherman's troops. She was raised by aunts and educated at Edgehill, a school near Charlottesville, which was conducted by Miss Randolph, a great-granddaughter of Thomas Jefferson. In 1886 she entered training at the New York Hospital and upon graduation she came to Hopkins.

On June 4, 1890, they were married at "Millwood" and Dr. Welch was best man. Twenty-three years later, in the only medical article in which Dr. Halsted mentioned either Mrs. Halsted or rubber gloves, the following appeared:

"In the winter of 1889 and 1890—I cannot recall the month—the nurse in charge of my operating room complained that the solution of mercuric chloride produced a dermatitis of her arms and hands. As she was an unusually efficient woman, I gave the matter my consideration, and one day in New York requested the Goodyear Rubber Company to make as an experiment two pairs of thin rubber gloves with gauntlets."

These proved so satisfactory that the resident surgeon, Dr. Bloodgood, also used them, at first for arthrotomies and then for all operations, and Dr. Halsted soon adopted them as well. Had Mrs. Halsted's skin been less sensitive it is probable that this refinement of surgical technic would have been delayed many years.

In some ways the Halsteds were alike. Both were somewhat aloof and limited their friends to a small group. Unquestionably they were both what is sometimes termed strong-minded. In many other respects they differed. Mrs. Halsted represented the aristocracy of South Carolina, and Dr. Halsted's forebearers considered themselves more New England than New York. Their household arrangements were unusual. They purchased a large house on Eutaw Place. Mrs. Halsted occupied the third floor while her husband lived on the second floor. They had their evening meal together. When they entertained, which was infrequent, a great deal of preparation preceded the event. Dr. Halsted personally chose each coffee bean which went into the brew and then ground the coffee himself. The wine likewise received his close supervision. He disliked wrinkles in the tablecloth and ironed the cloth after it had been placed on the table. These dinners became more and more of an ordeal and finally were given up altogether when Mrs. Halsted found they always precipitated an attack of migraine.

Mrs. Halsted liked the rural life but this fondness was not shared by her husband. When the school term was over each spring she would go to their summer home, High Hampton, near Cashiers in the mountains of North Carolina. Her husband, on the other hand, would collect his soiled linen and take it to Paris to be laundered. This accomplished, he would then make his annual visit to various European medical centers. He always included Dr. Kocher's clinic, for a real personal and professional friendship existed between them. Each was influenced by the other and a comparison of their methods shows much in common.

Each fall Dr. Halsted would stop by High Hampton for a few days and he and Mrs. Halsted would then return to Baltimore for another winter. High Hampton incidentally is now a popular mountain resort and is visited by many Richmonders who like its cool nights, remarkable scenery and excellent golf course.

During a visit to England in 1905, Doctors Halsted, Osler, Kelly and Welch sat for the famous painting "The Four Doctors" by John Singer Sargent. This picture, which now hangs in the Welch Library in Baltimore, has caused considerable concern during the past few years due to a gradual fading of Dr. Halsted's portrait. It is now recalled, or at least so goes the story, that the Sargent and the Surgeon did not hit it off too well and that the pigments depicting Dr. Halsted may have been less permanent than those used for the other three subjects. Dr. Osler's comments at the time are of interest in this connection. In a letter to Mrs. Henry M. Thomas he states:

"The picture is an astounding success. The critics are extravagantly enthusiastic. 'No such group since Rembrandt, etc.' I cannot feel that he has done justice to Halsted and Kelly. Welch is wonderfully good. You can see his strength as a

halo. He has caught the ochrous hue of my dour face, but he evidently has no surgical leanings as there is a hidden want in the other two." Be that as it may, Dr. Halsted is slowly fading into the background.

But to return to Dr. Halsted as a surgeon: It cannot be said that his fame has faded during the twenty-four years that have elapsed since his death in 1922. Many honors came to him during the thirty-six years he spent at Hopkins. He was the recipient of numerous honorary degrees and received honorary membership in virtually all of the leading European surgical societies. A few months prior to his death he was awarded a gold medal at a testimonial dinner by the American Dental Association for "original researches and discoveries upon which the technic of local and neuro-regional anesthesia in oral and dental practice now rests." It is significant that this work was done by him forty-five years before the award. The same interval of time elapsed before surgeons generally appreciated the superiority of non-absorbable suture material and just during the past decade have they begun to apply the principles of wound healing laid down by him half a century earlier.

Perhaps this explains the failure of the Nobel Prize Committee to choose Dr. Halsted as a recipient of this award. His contributions to surgery were so far in advance of his times that their full worth were not appreciated during his life. It is reasonable to assume that the Nobel committee fell into this common error—for certainly Dr. Halsted's contributions were second to none during surgery's most formative years.

The National Society for Medical Research.

A clearing house for information on medical studies and discoveries, has been organized under the sponsorship of the Association of American Medical Colleges with the cooperation of 101 national scientific organizations.

Dr. Anton J. Carlson, President of the National Society for Medical Research and Professor Emeritus of Physiology at the University of Chicago, has announced the establishment of the Society's headquarters office at 25 East Washington Street, Chicago 2, Illinois. Ralph A. Rohweder, 1946 President of the Chicago Junior Association of Commerce and former consultant and editor for the National Safety Council, has been appointed Executive Secretary.

The Society has as its purpose the advancement of research in medicine, biology, pharmacy, dentistry, and veterinary medicine.

Dr. Carlson emphasized that an important function of the Society is to analyze and expose the propaganda of small but highly vocal groups which object to the use of animals in the experiments without which medical science would still be in its infancy. Every year doctors and researchers must take time from their vital duties to defeat legislation proposed by these groups which would hamper or stop the work of the medical profession.

New Upjohn Window Display.

Dad, grandmother, and little sister are looking through the window of a hospital nursery in the centerpiece of the 1946-47 Upjohn vitamin window display. The object of their attention is the newly born baby which a nurse is holding up for them to see.

The painting is by Douglass Crockwell and is one which will hold a good deal of human interest for all members of the family. The side pieces of the display are placards picturing different Upjohn vitamin products.

These displays will begin making their appearance in drugstore windows sometime in September.

Winthrop Increases Production.

Increased producion of synthetic amino acids is made possible by new methods of preparation developed in the laboratories of the Winthrop Chemical Company, Inc. Winthrop pioneered in the use of the readily prepared ethyl acetamidocyanoacetate for the synthesis of a wide variety of amino acids, and only two steps are required in production when this intermediate is reacted with an alhyl halide and the resulting product hydolyzed. The new method is useful for the preparation not only of such naturally occurring amino acids as alanine and leucine, but also of many amino acids not known to occur in nature.

MAKING A CORRECT DIAGNOSIS: ITS IMPORTANCE AND PROBLEMS*

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It has been said that good diagnosis is the foundation or basis for doing good medicine, and this dictum is certainly as true in our own fields of ophthalmology and oto-laryngology as in any other branch of medicine.

Will not all of us agree that knowing what is wrong with the patient is the most important thing in determining adequate treatment, in giving an intelligent prognosis, and in keeping the patient, the family, and friends satisfied? On the other hand, not knowing what is wrong makes one wonder if the treatment is adequate, makes an intelligent prognosis impossible, and leads to a state of embarrassment and anxiety on the part of the patient, the family, and relatives.

A case correctly diagnosed gives the physician a certain sense of security because, with this knowledge, he is then able to give the patient the benefit of proper treatment and advice or is in a position to refer the case to some one whom he feels is better prepared to handle the situation.

It is my impression that papers and discussions at most medical meetings, as well as the handling of patients in our offices, tend to place major emphasis on treatment and minor emphasis on diagnosis. The reverse should be true; and if this question of finding out what is wrong with a sick person is perhaps being given too little attention, then we should take stock and ask ourselves the reasons therefor. Perhaps the first and foremost cause is the lack of time that we are willing to give each case, particularly each new patient. In the hustle and bustle of a busy office and a heavy day, are we not inclined to rush just a little too much? Could we not profit by the commands which we have seen so often, namely, Stop—Look—Listen; and I would like to add two others, and perhaps the most important of all, Think and Evaluate! Stop—Look—Listen—Think and Evaluate: if we will take time to do these things, more correct diagnoses will be made. Our diagnostic acumen depends to a great extent on our ability to think and to think in terms of a differential diagnosis. When I was in medical school, I always liked the teachers of medicine who, on quizzes and examinations, would give the class case reports with clinical history, physical, and laboratory findings and would ask, "What is your diagnosis and what would you consider in the differential diagnosis?"

Telescopic vision and telescopic thinking are not consistent with good diagnosis. Our mental, as well as our visual fields, must be broad and not contracted, so that we may be thinking of and seeing the over-all picture and not just an isolated part or that part which concerns our own particular specialty. Is not making a diagnosis somewhat comparable to working a jig-saw puzzle? We must take all the findings, the history, the physical, and the laboratory reports, try to fit them in their proper relationships and then look at the whole picture. The late Dr. Clendening said, "Disease leaves its mark upon the look in a man's eye, the mottling of his skin, the swing of his leg, the bend of his back, and the heave of his chest. It is for you to read these signs."

The history, the physical findings, and the laboratory reports are all important, but I feel that a good history is probably the most important of all; and what do we mean by a good history? Not only let the patient talk, perhaps not as long as some would like to, but at least long enough to get a good idea of the symptoms and to learn the manner in which they are recited. At times I feel that the most important thing in a history may not be what the patient says but the manner in which it is said. It has been my experience, as well as yours, that cases with definite pathology or definite conditions will give a fairly clear cut, concise history and stick to it; on the other hand, patients who fall in the psycho-somatic group give an entirely different type of history, one that is rambling and uncertain with a multiplicity of symptoms varying in intensity and degree and following no logical sequence and having no logical basis. It is with this type of patient that we have to be particularly careful in reaching our conclusions and evaluating the history and physical findings. Does some minor pathology or ab-

*Address of the President delivered before the Virginia Society of Ophthalmology and Oto-Laryngology, at Roanoke, May 4, 1946.

normality account for such a multiplicity of symptoms? Perhaps not. All of us see many cases who have so many more symptoms and complaints than their physical findings could possibly explain; and it may be unwise because we find something that is not exactly in order, to make the patient feel that this is responsible for his complaints. There are many who are out of line when checked with the blood pressure instrument, and shall I venture to say that even the x-ray sometimes discovers things that are often coincidental and not etiologic. We must be realistic and use good judgment and common sense, because there are few of us who have reached the fourth or fifth decade who do not need some replacements, but, unfortunately, these replacements cannot be made.

It is my impression that one of the most frequent diagnostic blunders we make is our failure to recognize the functional basis for so many complaints. I fully realize that extreme care and caution must be exercised not to label a truly organic condition with the label of psycho-neurosis; on the other hand, I also realize that the same care and caution must be exercised not to label a truly psycho-neurotic condition with the label of an organic disease. Both mistakes should be equally embarrassing, and I wonder which mistake is made more often. I believe the latter, and I believe further that it is just as serious an error in diagnosis as the former. With this latter statement, I am sure many of you will disagree, and perhaps you may be justified in doing so; but two years' training in neurology many years ago, plus my observation and handling of patients since that time, leads me to that conclusion. Let us not forget that unsatisfactory and uncomfortable situations in life, disappointments and discontent, often give rise to symptom complexes resembling somewhat organic conditions; and if we do have a tendency to forget this fact, I am sure it will not be long before we will have patients come in who have been the rounds, who have had various operations, not only in our own particular field but in others as well, and who are still complaining and seeking and hoping to find some doctor somewhere who can give them perfect physical health, something they may already have but are not conscious of it. Because these cases cannot or will not recognize the real reason for their situation, they find it more convenient and more satisfying to transfer their symptoms and to look for a more socially acceptable cause.

In conclusion, I want to say that psycho-neurotic conditions have always been with us, but we have not heard too much about them. The men returning from the services have likely gotten a better insight into conditions of this sort than they could have gotten otherwise, and they are going to make us more and more conscious of psycho-somatic medicine. It is a definite field and many of its manifestations are present to a greater or lesser degree in all of us at one time or another. Cases are numerous, but those trained in their handling and understanding are few. Medical schools in the future should pay more attention to instructing and teaching in this branch of medicine than they have done in the past.

502 Medical Arts Building.

Rockwell Kent Medical Drawings Offered by Schering.

A portfolio of reproductions of the unique illustrations recently completed by Rockwell Kent is being offered to interested physicians and pharmacists by Schering Corporation, Bloomfield, New Jersey. The original drawings by the noted painter, Mr. Kent, were commissioned by Schering for use in promotion pieces. Each drawing portrays, in the artist's characteristic manner, the mental symptoms of a patient suffering from a specific endocrine deficiency.

The full color reproductions are eleven by fifteen inches, mounted suitable for framing, and are devoid of any advertising. Portfolios are available free on request.

A REVIEW OF ONE HUNDRED AND TWENTY-NINE CONSECUTIVE CASES OF TUBERCULOSIS TREATED WITH PNEUMOTHORAX OVER A TEN YEAR PERIOD*

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Newport News, Virginia.

Six years ago it was my pleasure to present to this Society a five year study and review of clinic patients with pulmonary tuberculosis.† This paper deals with some of those patients as well as all of those who have received pneumothorax treatment since then. One hundred and twenty-nine consecutive patients make up the cases reported on.

Artificial pneumothorax was first successfully performed[1] in 1892, but it was not until 1912 that this procedure became generally accepted.[2] For many years physicians had noted beneficial results in patients with pulmonary tuberculosis when the lung was compressed by spontaneous pneumothorax and/or hydrothorax. In fact, the injection of air into the pleural space was practiced—like so many procedures forgotten and revived in present-day medicine—by Hippocrates, for, according to A. K. Krause,[3] he injected air into empyema cavities.

The rationale of artificial pneumothorax has been stated to be both mechanical and physiological. M. Fishberg has summarized these effects[4] as follows:

A. Mechanical Effects—
   1. It augments existing tendencies to shrinkage.
   2. It approximates walls of cavities.
   3. It prevents the extension of the tuberculous process along the lymphatic and bronchial channels.

B. Physiological Effects—
   1. It produces ischemia of the lung with concomitant passive hyperemia.
   2. It diminishes the circulation of lymph (lymph-stasis).

   These two result in:
   (a) Limitation and demarcation of the affected area of lung tissue.
   (b) Proliferation of connective tissue.

As a result of these changes an exudative process is frequently converted into a productive one.

The procedure of injecting air into the pleural space was denied to many patients because for some time no one considered using this on bilateral cases, and it was thought to be only beneficial in the closing of cavities. Partial or selective collapse solved the problem of bilateral lesions. It was found to help even though the lung was not completely immobilized. Of course, the more perfect the immobilization the better the therapeutic effect.

Another group also denied the full benefits of pneumothorax was made up of patients with adhesions which prevented the collapse of the diseased portion of the lung. At first high positive pressures were tried, but this caused many dangerous complications, such as tearing the visceral pleura with hemorrhage, or the production of bronchiopleural fistula. Also circulatory embarrassment with mediastinal shift manifested itself frequently, and in the author's experience pleural effusions were more prevalent (as is common observation with increased positive pressures). However, in 1914 the operation of cutting most of these adhesions was made possible by the use of the thoracoscope, and another large group of patients was able to receive the benefits of artificial pneumothorax.

The picture will not be complete without mentioning phrenic operations, both temporary and permanent, for, at times, this procedure is not only beneficial but apparently life-saving. Many have seen and reported on the fact that only after this do some patients get a negative sputum (frequently because thick walled cavities do not collapse). It also has a part in controlling the shifting of the heart, mediastinum and trachea, too frequently noted when a long standing pneumothorax is terminated. One case that demonstrates the value of this operation is that of a patient who, due to many thick adhesions, did not get an adequate collapse. After viewing his films, the thoracic surgeon decided these could not be severed. A thorocoplasty was thought to be the procedure of choice, because of the large cavity in the diseased lung. The surgeon did a

*Read before the Seaboard Medical Association of Virginia and North Carolina, at Virginia Beach, December 12, 1945.

†Virginia Medical Monthly **67**:500-507, August, 1940.

temporary phrenic. Four weeks later the patient was transferred to the hospital in preparation for the operation, but when the surgeon returned, films showed that the cavity was much smaller, the sputum negative, and the patient improved greatly. This man was back at work in six months and has remained well for four years. Apparently the shifting of the diaphragm upward had closed the communication between the cavity and the bronchi, thus promoting healing and preventing the disease spreading.

A standard technique has been carried out in starting pneumothorax, as well as in refills. Procaine, 2 per cent, is always used in amounts never over two cc. Epinephrin was at first used in the solution but it was found to be unnecessary as the needle was never in place longer than the effects of the plain anesthetic lasted. Also, many patients complained of unpleasant sensations such as palpation, headache and nervousness directly attributed to the epinephrin. There have been no unusual reactions to this anesthetic either local or systemic. The procaine solution is injected to make a wheal waiting one or two minutes, the 26 G. needle is changed for a larger one (18-22 G.) and the solution is injected as the needle is pushed down to the parietal pleura. At this site slight pain is usually felt and more solution is injected; waiting a few seconds for anesthesia, the parietal pleura is then pierced. Drawing back on the plunger of the syringe and obtaining air proves that one is in the pleural space.

In none of the patients in this series was pleural shock, hemorrhage into the pleural space, or spontaneous collapse of the lung encountered. However, nine years ago, one patient had a needle broken which could not be recovered, it finally located in the posterior sulcus. Refills were continued and the lung re-expanded without any noticeable effect. He has had no complications from this and is well and working, having recently been accepted for life insurance.

The patients are frequently fluoroscoped, usually at each refill, with very short exposures at 4 M.A. or less; for, as has been pointed out recently, indiscriminate fluoroscopy can be dangerous to the patient as well as to the operator. However, this is an essential procedure if one is to adequately and intelligently keep a lung collapsed with the minimum of complications. As is pointed out by Homer L. Sampson, "The x-ray is not the handmaiden, but the mistress of therapeutic pneumothorax."[5]

Several patients in this group were given pneumothorax even though their disease was far advanced and their prognosis very poor. This was done for two reasons: one, it seemed to make them feel better (less toxic), and the other, they seemed to have less sputum with an occasional conversion from positive to negative. These cases are included in the statistics.

PNEUMOTHORAX DISCONTINUED (93 PATIENTS)

Present Condition			
Dead	*Not Improved*	*Improved*	*Well and Working*
(25)	(6)	(9)	(53)
27%	6%	10%	57%

Complications			
Poor Collapse	*Pleural Fluid*	*Empyema*	*Enteritis*
(21)	(36)	(5)	(6)
22%	39%	5%	1%
Pneumolysis	*Phrenic Operations*		*Thoracoplasty*
(6)	(7)		(1)
6%	8%		1%

TABLE 1

The first group to be discussed, Table 1, is made up of ninety-three patients who have had their artificial pneumothorax discontinued. Twenty-five or 27 per cent have died; however, the death rate for the whole series is 19 per cent. The average age of those who have died was thirty-one years. The average duration of the disease before death was three and one-half years. The end was hastened in most of the cases because the disease spread in spite of collapse therapy, but many went to work too soon and neglected their rest. The cry for labor during the war opened many jobs to these people who ordinarily could not obtain work. Two of the patients became worse after ill-advised pregnancies, another became a chronic alcoholic and one had pneumococcic lobar pneumonia in the opposite lung which left him so debilitated that the minimal tuberculosis in this lung lighted up and caused his death in three months.

Sixty-two patients in this group are living and well. Their pneumothorax treatment was carried out for an average of three years, and the average observation period in them has been nearly six years. Seven have had phrenic operations for relief of excessive shifting to the affected side. Four had to have their refills discontinued before advisable, because their lungs would not stay down. Five have had a frank empyema which followed a

spread of their disease in the presence of pleural fluid. One of these had a rather typical tuberculous pneumonia and subsequently developed a broncho-pleural fistula; two of these are living and well. Six patients in this series have had their adhesions severed in order to give them an adequate collapse. One patient required a thoracoplasty. One patient developed an acute psychosis with delusions of persecution. Her refills were carried on during this time (two months), she is now well and working. One patient died with a coronary occlusion one and one-half years after his lung had re-expanded. Two patients had syphilis, one with an aneurysm; both received specific treatment and are well and working. Thirty-six, or 39 per cent, had pleural fluid at some time during their treatment. Of the sixty-eight patients living, fifty-three, or 78 per cent, are well and working; nine, or 13 per cent, are well, but not working. Six, or 9 per cent, are still resting over eighteen hours per day and are not doing well.

PNEUMOTHORAX CONTINUING (36 PATIENTS)

Present Condition		
Not Improved	*Improved*	*Well and Working*
(5)	(7)	(24)
14%	19%	67%

Complications			
Poor Collapse	*Pleural Fluid*	*Empyema*	*Enteritis*
(5)	(5)	(2)	(0)
14%	14%	6%	
Pneumolysis	*Phrenic Operations*	*Thoracoplasty*	
(6)	(0)	(0)	
17%			

TABLE 2

Table 2 shows that, of the thirty-six patients still receiving pneumothorax, twenty-four, or 67 per cent, are well and working, seven or 19 per cent are improved, but five, or 14 per cent, are not improved.

The complications in this group are much less, as expected (no deaths), especially in the occurrence of pleural fluid. Some have contended that the presence of fluid does not influence the course of pulmonary tuberculosis treated by artificial pneumothorax, but in this review one is impressed by the seriousness of this complication, for 60 per cent of the patients now dead had fluid at some time during their treatment, whereas, among the living only 30 per cent have had fluid. This trend was noted several years ago and since then an attempt has been made to remove any fluid, noted on fluoroscopy, at each refill.

BILATERAL PNEUMOTHORAX (16 PATIENTS)

Present Condition			
Dead	*Not Improved*	*Improved*	*Well and Working*
(2)	(1)	(3)	(10)
13%	6%	19%	63%

Complications			
Poor Collapse	*Pleural Fluid*	*Empyema*	*Enteritis*
(5)	(7)	(1)	(1)
31%	44%	6%	6%
Pneumolysis	*Phrenic Operations*	*Thoracoplasty*	
(4)	(0)	(0)	
25%			

TABLE 3

Table 3 is a resume of sixteen patients who have been given bilateral pneumothorax. These same patients are counted in the other tables, but for a comparison this does not matter. The present condition of these patients compares favorably with those in Table 2. Bilateral pneumothorax gives excellent results and there appears to be no more hazard to this procedure than in unilateral cases. Probably many cases which developed a spread should have had bilateral pneumothorax started. The tendency has been to delay, with often fatal results. One patient not included in the series has been receiving 2,000 cc. intraperitoneally for nearly three years. This man refused thoracoplasty and as large adhesions prevented the collapse of his lungs, it was tried bilaterally. Pneumoperitoneum solved his problem. His sputum is negative and he is working every day in a service station.

ALL CONSECUTIVE PNEUMOTHORAX PATIENTS (129)
10-YEAR PERIOD

Present Condition			
Dead	*Not Improved*	*Improved*	*Well and Working*
(25)	(11)	(16)	(77)
19%	9%	12%	60%

Complications			
Poor Collapse	*Pleural Fluid*	*Empyema*	*Enteritis*
(21)	(41)	(7)	(3)
16%	32%	5%	2%
Pneumolysis	*Phrenic Operations*	*Thoracoplasty*	
(12)	(7)	(1)	
9%	5%	0.8%	

TABLE 4

Table 4 gives the complete picture of the whole group of one hundred and twenty-nine consecutive pneumothorax patients over a ten year period. The mortality rate, while too high, still compares favorably with any other method of treating pulmonary tuberculosis. The proof that these people can be and are helped by this relatively simple procedure, that they can expect relief of symptoms in a very

short while and will be able to return to a gainful occupation much sooner than by any other method of treatment, gives them more encouragement to accept artificial pneumothorax. The high percentage of well and working patients in this group bears out this observation. The complications in the group are not serious; in fact, a poor collapse really should not be considered a true complication, but it certainly caused complications. Pleural fluids occurred in 44 per cent of these patients; for the most part they were transitory and responded to aspiration or changes in refills, but it was always considered a serious complication. Empyema occurred in 5 per cent of the patients. It was not always fatal, and in two patients pneumothorax refills were continued. A thoracoplasty was necessary in only one case. Enteritis occurred in three patients (2 per cent) and was always fatal.

In conclusion, artificial pneumothorax, aided by pneumolysis when necessary, and occasionally requiring a phrenic operation on termination, is by far the most conservative as well as the treatment of choice in pulmonary tuberculosis, especially of the ulcerative, caseous, or pneumonic types.

BIBLIOGRAPHY

1. Kinghorn, M. R.: (Quoting the studies of C. Forlanini) Artificial Pneumothorax, by Edward N. Packard and others. Chapter 1, 18; Philadelphia, Lea and Febiger, 1940.
2. Lillingston, C.: The Treatment of Phthisis and Hemoptysis by Artificial Pneumothorax, *Lancet* **2**: 145-149, 1911.
   (Dr. E. L. Trudeau had his lung collapsed by Dr. C. Floyd in 1912, and this gave a great impetus to this comparatively new procedure.)
3. Krause, A. K.: The Practice of Artificial Pneumothorax by the Hippocratic School, *Am. Rev. Tbc.* **6**:327-330, 1922.
4. Fishberg, M.: Pulmonary Tuberculosis, Philadelphia, Lea and Febiger, 1932.
5. Packard, E. N., and others: Artificial Pneumothorax. Chapter IV, 63; Philadelphia, Lea and Febiger, 1940.

303 Medical Arts Building.

Floral Eponym(42)

FOTHERGILLA

JOHN FOTHERGILL, 1712-1780

FOTHERGILL, famous Quaker physician of London, is remembered for his original description of diphtheritic sore throat and facial neuralgia. He was a friend of the American colonies and with Benjamin Franklin, played an important part in the founding of the Pennsylvania Hospital.

Fothergilla is a small genus of North American shrubs of the family Hamamelidaceae, commonly called witch alder. It is related to the witch-hazel. The witch alders are rather ornamental, bloom in April or May and prefer low, moist places.

THE FORUM

Veterans Eligibility to Medical Treatment.

Physicians seeking hospitalization or out-patient treatment by the Veterans Administration for ex-servicemen can obtain prompt service by furnishing the VA with complete information about the veteran-patient as quickly as possible, Dr. Daniel B. MacCallum, medical director of the VA Richmond Branch, has announced.

In emergencies the family physician often inherits the task of establishing the patient's eligibility for care by, or at the expense of, the VA. Much time can be saved if the doctor obtains the basic facts concerning origin of the veteran's disability and the type of discharge from service before requesting authorization for treatment or hospitalization.

"Normally," Dr. MacCallum stated, "the private physician or hospital verifies the veteran's eligibility for medical care at VA expense before treatment is begun. If this is impracticable because of an emergency situation, the physician should contact the VA Roanoke Regional Office by telephone or telegraph within 48 hours. Delay in such notification may make reimbursement by the VA impossible."

The Regional Office in Roanoke will accept collect telephone calls and telegrams from physicians in emergency cases. The communication must be received within 48 hours after the physician initiates treatment or hospitalization if claims for payment are to be honored by VA. If service-connection of the veteran's disability is questionable, VA is authorized to pay for emergency care pending decision on the veteran's disability claim.

No veteran is eligible for out-patient treatment or hospitalization in other than a VA hospital unless the disability for which such care is desired is service-connected or service-aggravated to a degree deemed pensionable by the VA. Such care for a nonservice-connected disability will be provided, however, if it adversely affects a service-connected condition.

Admissions to VA hospitals are obtainable for veterans of both war and peace-time service. A war veteran is entitled to hospitalization for nonservice-connected disabilities if he has a discharge other than dishonorable, a VA hospital bed is available and not required for a veteran with a service-connected disability, and the veteran swears that he is unable to defray costs of transportation and hospitalization in a civilian hospital.

A peace-time veteran is eligible for hospitalization for a nonservice-connected disability if he received an honorable discharge from his last period of peace-time service, received a Certificate of Disability Discharge for a disability incurred in line of duty or is receiving a pension for service-connected disability, and has no adequate means of support. Peace-time veterans must fulfill the same requirements in obtaining hospitalization for service-connected disabilities except that the "no adequate means of support" condition is omitted.

Women veterans are subject to the same regulations as male veterans except that admission to non-VA hospitals may be authorized for nonservice-connected disabilities. Pregnancies are not considered disabilities for which treatment or hospitalization can be provided by the VA.

Hospital Survey and Construction Act.

With the signing by the President of this Act, an appropriation of 375 million dollars is authorized during the next five years for the construction of hospitals and health centers. Three million dollars is also authorized for State-conducted surveys of need. These must be made preliminary to the granting of Federal funds for construction.

The Act provides latitude for each State to develop its own program of hospital and health center construction, to be administered by State authorities under standards specified by the United States Public Health Service. The Surgeon General will be assisted in establishing standards by a newly created Federal Hospital Council consisting of eight members to be appointed by the Federal Security Administrator.

"This Act sets for the first time a national policy which makes it clear that hospitals in the future must be planned, located and operated in relation to the overall health needs of the people," Thomas Parran, Surgeon General, U. S. Public Health Service said. "This policy, as evolved through the leadership of hospital authorities of the country, is recognition of the integrated role that hospitals and health centers must play in the future. Adequate hospitals, health centers and related physical facilities are the essential workshops, without which it is not possible

to provide even a minimum of modern health and medical services."

Any State may initiate action by submitting a request to the Surgeon General for funds to carry out an inventory of existing hospitals, and to prepare a plan for the construction necessary to provide adequate care for all the people. In making the request, the States must designate a single State agency to carry out the survey and planning and must appoint a properly qualified advisory council to consult with the State agency. The proportionate share for each State of the total Federal appropriation for survey and planning will be determined by the populations of the several States. However, Federal funds must be matched by two to one in defraying the survey expenses.

Allotments for the actual construction of facilities will not be made until the State plan based on the survey findings has been approved. Construction allotments to individual States will vary in amount. Population will be one factor, and in addition, the average per capita income will be used in the allotment formula in such a way that States with a lower per capita income, where there is relatively greater need for medical facilities, will receive proportionately larger allotments per capita.

Applications for funds for individual construction projects must be channeled through the designated State agency. Here again, Federal funds may not exceed one-third of the cost of a project. Before any single project is approved by the Surgeon-General, sufficient evidence must accompany the building request to show that two-thirds of the total cost of construction is available from other-than-Federal sources, and that financial support is adequate for the maintenance and operation of the institution after completion.

Needed—A State Health Council for Voluntary Health Agencies

Unity is essential for a comprehensive health program to attain the best results. The health of a community is, after all, not a group of special interests. It is essentially a single interest with different aspects. To exhalt one of them, to get it out of focus, is unscientific, wasteful and misleading. People are interested in health not only because they want to be free of the aches and pains, but they want to be free of the restrictions and inhibitions that come from physical and emotional deficiencies or handicaps. It is easy, however, to exploit physical shortcomings, sufferings and personal anxieties in the name of "health." This is evident not only from the wide support accorded the voluntary health agencies, but also the tremendous fortunes that have been built up by selling people—in the name of health—everything from bottled tapwater to concentrated vitamins, to say nothing of harmful nostrums or systems. Since the beginning of the century the voluntary health agencies have grown from few to now over twenty thousand.

During World War II, the American Public was asked to contribute to the relief of the various allies in the form of a voluntary fund. In order to eliminate confusion and an overlapping of services the United War Fund was established and local community chests willingly had the public's support of this added agency. This being on a national scope readily demonstrated the most efficient form of voluntary giving. In 1941, the Rockefeller Foundation made a grant to the National Health Council for the purpose of bringing together facts and observations regarding the voluntary health agencies in the United States. As a result of a three-year study, the Gunn-Platt[1] report is a close first-hand study of five hundred and seventy voluntary health agencies. Sixteen national organizations[2] were studied and their segments of regions, city, and county agencies surveyed. This authoritative report makes an analytical study of the voluntary health organizations breaking down the survey into origins, social values, effectiveness, role of state and national organizations, financing, and their future. The professional organizations such as American Public Health Association, American Medical Association, National Safety Council are given a separate study.

The American Red Cross is allotted an entire critical review and not included as one of the fifteen national voluntary organizations. It is stated that

1. "Voluntary Health Agencies"—by S. M. Gunn and Philip S. Platt. Raland Press Co., New York. 1945.

2. List of Organizations: American Cancer Society; American Diabetes Association; American Heart Association; American Public Health Association; American National Red Cross; American Social Hygiene Association; American Society for the Hard of Hearing; Maternity Center Association; National Committee for Mental Hygiene; National Foundation for Infantile Paralysis; National Organization for Public Health Nursing; National Society for Crippled Children; National Society for the Prevention of Blindness; National Tuberculosis Association; Planned Parenthood Federation of America.

the American Red Cross with its rich contributions in war and peace time is now difficult to recognize in its old form. Needed adjustments are evident in the Red Cross as many official and voluntary health agencies have experienced unhappy working relationships which have been attributed to smugness and self-sufficiency resulting in cooperation seldom in genuine desire or fact. To May 1945, the Red Cross had six hundred and fifty-four million dollars from public support which is unique for any national health agency. The potentialities for its health and leadership improvement are tremendous.

In making this study of the fifteen agencies the purposes of need, support, goals, weaknesses and adjustment to changing times and role in post war years are reviewed. Three fairly distinct types of organizations exist:

1. Specific diseases, as tuberculosis, cancer, poliomyelitis, and diabetes.
2. Disorders of certain special organs such as diseases of the heart, loss of vision, dental defects, locomotor or skeletal disorders (others are those associated with poliomyelitis.)
3. Problems that affect health and welfare of special groups, such as maternal and child hygiene, planned parenthood, etc.

The outstanding trait of the voluntary health agencies has been their freedom, and the lack of cooperation of several of these agencies in a national health council is a fear in relinquishing their identity, mode of financing and their individually attained superiority over other voluntary groups in raising funds. As they offer the people a variety of aids and services and make a variety of appeals, they increasingly confuse the public[3], which often feels itself being pushed in several directions at once. Because of their multiple functions, they have become overlapping, their board members are not well enough informed, and lack of vision and leadership is too frequently observed.

It is also significant that organizations whose purpose is to promote health and to prevent disease should give so little attention to the basic conditions. We find what we should expect—namely, that these people who are the greatest sufferers from poor health live in the worst housing and in the worst environment. They have the lowest level of education —all of these continue endlessly in a vicious circle.

In 1945, the American public contributed fifty-eight million dollars to the fifteen national voluntary health agencies and their local branches. The monies varied from thirty thousand dollars for the American Diabetes Association having six hundred and sixty thousand cases to fifteen million dollars for the National Foundation for Infantile Paralysis having one hundred and seventy-five thousand cases as a grand total and nineteen thousand new cases in 1944. This unevenness of contributions is based on public response—a brace has more appeal than diabetic coma, or heart disease. The ability of a national health agency to obtain public support seems to have little relationship to the agencies relative importance or its effectiveness in advancing the public's health. Agencies with special money raising devices profess a preference to be independent. The average cost of raising a dollar as reported by the Community Chests and Councils is $.059. Of the seven national organizations that ventured an estimate, this varied from 6 cents to 38 cents on a dollar collected.

The most striking fact is the marked unevenness of the voluntary health movement in our country. Excellent societies abound but many are inadequate. The movement has lacked central direction and planning and the time has now come for more coordination of effort. More and more ways must be found to support the voluntary health program without the present competitive and confusing duplication of appeals for funds to which the public is exposed. Several communities have unified their agencies; one of the best known organizations is the Cincinnati Public Health Federation[4], a division of the Community Chest. Montgomery County, Maryland, has had a Health Council in operation for ten years, and it is a division of the Community Chest.

The two agencies with specially effective money raising devices (the National Tuberculosis Association and National Foundation for Infantile Paralysis) should broaden their fields of interest and

3. The reviewer had one patient who was approached by four different health services; he became so confused by excess "sales pressure" brought to bear on his condition that he refused all care.

4. "Twenty-Five Years of Effort and Service"—The Public Health Federation-Division of the Community Chest. Cincinnati, Ohio. December, 1945.

service—the seal sale to support allied promotional-educational activities and the March of Dimes to support services for all the crippled.

The preparation of a national health agency budget should be attempted. Lessons can be learned of the effectiveness of the National War Fund. Out of the experience of budgeting would come a more unified planning and more integrated program of work. It would serve to establish a wider understanding of the essential unity of the human being and attain the highest possible level of physical and emotional health. Governor Tuck has appointed a group composed of a Legislative Commission[5] with State Health Department and Medical Society of Virginia[6] representatives to study such a problem.

Virginia could take the lead in pooling these agencies into a unified group on State level and a State Health Council may well be the objective. This would be an incorporated body including representation from the State Health Department, the Medical Society of Virginia, the Community Chests and Councils, and the principal voluntary health agencies. Such a council could act as a clearing house for the preparation of a state-wide plan of health development. Its functions, among other things, might well be to acquaint the people of the State with the operations of the various existing agencies and at the same time call their attention to areas of service that are still uncovered.

A great achievement would be attained if a State Health Council[7] could succeed in launching a federated fund-raising plan which might be launched throughout the State with the support of the Governor, and would at one time raise sufficient funds to support all of the local voluntary health organizations of the State. This has already proven to be acceptable to the American people through the National War Fund in conjunction with the Community Chests. The Gunn-Platt report stresses throughout the need for unified action in its exhaustive study. The entire text of the report brings the realization of the growing necessity for such an effort. We, of the medical profession have the opportunity to render the people of Virginia an invaluable service in acting as the guiding force to bring this needed unity in the voluntary health services to a reality.

MORGAN B. RAIFORD, M.D.,
Franklin, Virginia

5. First Session of this Commission was held June 21, 1946.
6. VIRGINIA MEDICAL MONTHLY **73**:297, June, 1946.
7. Dr. Louis I. Dublin, Chairman, Executive Committee, for Study of Voluntary Health Agencies. Personal communication. July 3, 1946.

Habit-Forming Properties of Pain Relieving Drug Emphasized.

Emphasizing the fact that Demerol, a substitute drug for morphine, has habit-forming properties, H. J. Anslinger, Commissioner of Narcotics, Washington, D. C., writing in the July 13 issue of *The Journal of the American Medical Association,* says:

"Now comes an article by Paul de Kruif in the June issue of the *Reader's Digest* entitled 'God's Own Medicine—1946' under the headline 'The pain-fighting power of demerol is as miraculous as that of morphine—without the opiate's danger of addiction.' This article adroitly makes no reference to the work of Dr. C. K. Himmelsbach of the United States Public Health Service and Drs. Hans H. Hecht, Paul H. Noth and F. F. Yonkman of Detroit, all of whom warned of the danger of addiction.

"Demerol was placed under federal narcotic control by the Congress because of evidence given before that body of its dangerous properties. Some of the persons referred to in de Kruif's article could have attended the hearings before the Ways and Means Committee and could have testified as to what they thought about the drug, but they elected to remain silent.

"I fear a wave of Demerol addiction if physicians who read this article believe what I consider the reckless and dangerous statements made by de Kruif that the drug is free from addiction properties. This is information somewhat similar to that which appears in the circular distributed by the manufacturer of Demerol to push sales. Had this article been prepared on a strictly scientific basis it would have sounded a strong warning about the danger of addiction. Our files contain numerous cases of addiction involving the use of Demerol."

Demerol, also known as Dolantin, was discovered in Germany and made its appearance several years ago in the Argentine. The author points out that both of these countries immediately placed the drug under strict control.

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for July, 1946, as compared with the same month in 1945, and for the period of January through July, 1946, compared with the same period in 1945, follows:

	July 1946	July 1945	Jan.-July 1946	Jan.-July 1945
Typhoid and Paratyphoid	20	15	58	60
Diarrhea and Dysentery	429	792	1,600	2,375
Measles	473	28	12,701	1,213
Scarlet Fever	70	70	2,022	2,612
Diphtheria	36	11	261	144
Poliomyelitis	14	61	22	87
Meningitis	9	14	157	178
Undulant Fever	5	7	33	18
Rocky Mountain Spotted Fever	18	35	47	53
Tularemia	4	6	38	29

DIPHTHERIA

Diphtheria has become one of the most urgent health problems in post-war Europe. During the past winter, Germany was having as many as 17,000 cases a month; the Netherlands, 5,000 a month; Poland, 4,000 a month; and Czechoslovakia, 3,000. The disease seemed to be particularly virulent, having a high incidence of sequelae and an unusual case fatality rate.

Under the Nazi reign in Germany no large scale immunization program was practiced, and even before World War II diphtheria had begun to increase both in severity and frequency. With the onset of hostilities and the expansion of the Nazi state, immunization both in the homeland and occupied territories was practically forgotten altogether. It is felt that the present situation in Europe is largely due to the development of a virulent strain of C diphtheria in Germany and its exportation into occupied territories, where there were no facilities for immunizing the population.

The question now arises as to whether or not the United States will be affected by the increase in Europe. Without doubt, many men in service in the areas of high incidence have become carriers of virulent diphtheria, although they may never have had obvious clinical manifestations. The probability of the disease being disseminated throughout the United States by returning and returned personnel is great.

Has the United States already been affected? There are certain indications that it has. During the first six months of 1946 there were 1,683 more cases than in 1945, an increase of 24.9 per cent. In Virginia, diphtheria declined steadily through June 1945, making an all time low of 345 cases for the year. This past year, ending June 30, 1946, 669 cases were reported. This is an increase of 94 per cent.

As an index of a change in the virulence of the organism, the ratio of reported deaths to reported cases was computed for the five years. From the table below it will be noted that there has been an increase in this ratio in the past two years. The probability of this increase being due to chance variation is only one in forty.

DIPHTHERIA IN VIRGINIA LAST FIVE YEARS

	Cases	Deaths	Case Fatality Rate
1941-1942	755	44	5.8
1942-1943	648	40	6.2
1943-1944	349	17	4.9
1944-1945	345	29	8.4
1945-1946	669	52	7.8

From the statistics available it appears that both the incidence and virulence of diphtheria here at home are increasing.

Immunization against this disease has been voluntary (to a large extent). Since 1920 the infection in the United States has decreased to such an extent that it has been receiving relatively little consideration. Therefore, certain portions of the populations have not been immunized, and it may be through these susceptibles that the disease will regain its lost prominence.

In conclusion, the following is quoted from a recent editorial appearing in the New England Journal of Medicine: "An immune population is the best assurance against occurrence of a diphtheria epidemic. The low incidence of diphtheria in this country in recent years has created a feeling of security that is totally unwarranted and that, in fact, may be the fuel on which an epidemic will feed unless the dampening effect of widespread immunization serves as a control."

HEMORRHAGE AND OBSTETRIC MORTALITY

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

Obstetric mortality rates have been wonderfully reduced during the past fifteen years. This has no doubt been accomplished by the continued study of these problems and the dissemination of information about them. This has been done by the medical profession and not by the legislators who now seek to take over and do the job by using government employees and using the citizens' tax money in lavish manner. It is even proposed in the Pepper Bill to take care of these babies until they are 21 years old, or until they are able to vote.

It must be admitted that the mortality rate is still too high and that preventable deaths still occur too frequently. The problem needs to be further considered. One of the problems is to give hospital care to those who need it. Fortunately, there are now far-seeing legislators or statesmen who recognize this fact and are proposing appropriate measures. However, no appropriation can be efficacious unless the patient receives suitable treatment.

At the present time, hemorrhage furnishes the greatest number of deaths and the greatest number of these is postpartum hemorrhage. In a study made by this Committee of 475 maternal deaths, 92 were due to hemorrhage, 51 of these were classified as postpartum hemorrhage. This study was completed 5 years ago and the proportion of hemorrhage now has been further increased as the toxemia deaths have declined. It was also found that a considerable number of these hemorrhage deaths were classified as preventable. A number of different facts contributed in different cases to this conclusion. Principally, however, the conclusion depended upon whether or not the patient had had the treatment which is generally recognized as being most helpful. It is obvious, therefore, if we are to continue to reduce the mortality, we have to consider these errors and do what we can to prevent them. Several of these patients died after the attending physician had left the home or the delivery room. In looking over them, one is impressed with the fact that treatment was often started too late. Obstetricians are so accustomed to the sight of blood that bleeding is sometimes taken too casually. Portpartum hemorrhage is most likely to occur after long, difficult or instrumental labor. Prenatal study and planned labor may often be the answer to this.

The correct or successful conduct of the third stage of labor is important. There is not an entire unanimity of practice and belief in this respect. Attention is called to the fact, however, that there is much evidence at present to indicate that the placenta in most cases is separated almost immediately after delivery. Where this is true its prompt delivery is highly beneficial. Pressure with the fingers at the junction of the lower third with the upper two-thirds of the uterus with slight tension on the cord will determine this. If it is not separated it is best to wait a reasonable time. Ergotrate given intravenously as the shoulder is being delivered faciilitates this considerably or rather it facilitates the delivery of the placenta. After its delivery, pressure on the lower uterine segment carrying the fundus upward as described by Dickinson in 1899 is most helpful. General anesthesia during the third stage of labor conduces to relaxation and hemorrhage. Local anesthesia renders general anesthesia unnecessary in the third stage of labor. The Crede method of expulsion of the placenta so widely used for nearly a hundred years probably in many cases increases the hemorrhage. Waiting a long time for the placenta to be delivered has been considered to be a virtue. If bleeding is at all excessive, the placenta should be removed at once by the method already mentioned but if not, it should be removed manually. Fortunately, if the case has been successfully managed to this point it is very seldom necessary to do this. If any intrauterine manipulation is done this should be preceded by a change of gloves and repreparation of the patient. If no line of separation can be found between the placenta and the wall of the uterus it may be a placenta accreta which is itself a serious complication and usually cause for a hysterectomy. Fortunately, all well-conducted hospitals are now prepared to match blood and give transfusions promptly. A small amount given early is more efficacious than large transfusions later on. Very rarely uterine atony with massive hemorrhage will occur. Here Pitocin is helpful, and tight uterine packing with stimulation of the fundus by manipu-

lation. Very rarely the condition will require hysterectomy. If the patient has been properly managed to this point this dilemma will almost never occur.

It is obvious that every obstetric case should be managed throughout with the idea in mind of preventing death or injury to mother or child. This result may be approached by keeping in mind at least the principal dangers. A course may be followed which may reasonably be expected to prevent the occurrence of these complications or to give them prompt treatment.

New Books.

Below is a list of some of the newer additions to the Library of the Medical College of Virginia. They are available to our readers under usual library rules:

Altenburg—Genetics.
Anson—Advances in protein chemistry, Vol. 2.
Ash and Spitz—Pathology of tropical disease.
Bancroft and Murray—Surgical treatment of the motor skeletal system. 2 v.
Bancroft and Pilcher—Surgical treatment of the nervous system.
Brooks—Critical studies in legal chemistry of foods.
Boyd—Surgical pathology, 5th ed.
Cantarow—Lead poisoning.
Ciper—Prescription writing and materia medica.
Craig—The Etiology, diagnosis and treatment of amebiasis.
de Navarre—Chemistry and manufacture of cosmetics.
Du Nouy—Studies in biophysics.
Fedder—A girl grows up.
French—Psychiatric social work.
Garrison—Medical bibliography.
Gold—Cornell conference on therapy, vol. 1.
Goldschmidt—A study on spontaneous mutation.
Gould—Trichinosis.
Groves—Marriage.
Harrison—American Foundations for Social Welfare.
Heath—What people are.
Herrick—New Drugs.
Herz—Motor disorders in nervous diseases.
Hesse—Narcotics and drug addiction.
Hollis—Social case work in practice.
Hopkins and Williams—Organic reagents for organic analysis.
Hoskins—The biology of schizophrenia.
Hume—Doctors East, Doctors West.
Justin—Foods.
Kremer—American pharmaceutical documents.
Levinson and McFate—Clinical Laboratory diagnosis, 3rd ed.
Lichtwitz—Nephritis.
Lieber—The Einstein theory of relativity.
McEwen—Textbook of vertebrate embryology.
McCrae—Clinical urology.
McGrath—Nursing in commerce and industry.
Macy—Hidden hunger.
Manson—Dysentery disorders.
Marsland—Principles of modern biology.
Maxwell—Introduction to diseases of the chest.
Mitchell—Textbook of pediatrics. (Moulton, ed.)
A.A.A.S.—Research conference on cancer.
Movitt—Digitalis and other cardiotonic drugs.
Napier—The principles and practice of tropical medicine.
N. Y. Academy of Med. Lecturers to the Laity.—Modern attitudes in psychiatry.
Nicola—Atlas of surgical approaches to bone and joints.
Olson—Prevention, first aid and emergencies.
Patten—Human embryology.
Pregl and Grant—Quantitative organic microanalysis.
Proc. of the workshop on administration of college programs of nursing.
Rafferty—Artificial pneumothorax in pulmonary tuberculosis.
Rahn—Microbes of merit.
Sante—Principles of Roentgen interpretation.
Savory—The Arachnida.
Schwedel—Clinical Roentgenology of the heart.
Skinner—The science of dental materials. 3rd ed.
Smith—Handbook of industrial psychology.
Solomon—Tyroglyphid mites in stored products.
Standardized plant names.
Stern—Medicine in industry.
Stern—Medical services by government; local, state and federal.
Stern—The attendant's guide.
Strecker—Psychiatry in modern warfare.
Sutheim—Introduction to emulsions.
Thewlis—The care of the aged.
Todd—The health care of the family.
Togna—Everybody's way to health and fitness.
Topley and Wilson—Principles of bacteriology and immunity.
Vitamins and hormones, vol. 3.
Weygard—Organic preparations.
Wohl—Dietotherapy; clinical application of modern nutrition.

PROGRAM

(PRELIMINARY)

98TH ANNUAL MEETING

MEDICAL SOCIETY OF VIRGINIA

CAVALIER HOTEL, VIRGINIA BEACH

October 14, 15 and 16, 1946

BUSINESS SESSION

Monday, October 14

9:00 A.M.

REGISTRATION

9:30 A.M.

COUNCIL—Small Parlor

11:00 A.M.

HOUSE OF DELEGATES—Ballroom

3:00 P.M.

HOUSE OF DELEGATES—Hunt Room

Tuesday, October 15

HOUSE OF DELEGATES—Time and Place to Be Announced

SCIENTIFIC SESSIONS

Monday, October 14

3:00 P.M.

Ballroom

OCCIPUT POSTERIOR AND ITS TREATMENT—Millard B. Savage, M.D., Norfolk

Etiological factors. Discussion of the mechanism of labor with particular reference to anterior and posterior rotation, deflection and arrest. Treatment by a modified Scanzoni maneuver using duplicate forceps.

Discussion—Waverly R. Payne, M.D., Newport News.

COMPLICATED SURGERY OF THE ABDOMEN WITH SPECIAL REFERENCE TO ANESTHESIA, DRAINAGE, PRE- AND POST-OPERATIVE CARE, WITH CASE REPORTS—George A. Wright, M.D., Marion

This series of cases embraces only those with peritonitis of more than a regional scope. Selection of anesthetic is important. These cases necessitate nutrition and in order that there will be no increase in the blood sugar, insulin should be given with intravenous glucose in sufficient amount to prevent even a transient increase. A Penrose drain ordinarily serves every purpose as a substitute for rubber tubing and will minimize the occurrence of post-operative hernia.

Discussion—A. P. Jones, M.D., Roanoke

CARCINOMA OF THE COLON—Frank S. Johns, M.D., Richmond

The author observes that surgery of the colon has advanced rapidly in recent years. For carcinoma, we call attention to the value of immediate aseptic anastomosis following resection of the growth. We wish to emphasize the advantages of the immediate anastomosis over the Mikulicz and other forms of exteriorization of the colon. (*Lantern slides.*)

Discussion—J. M. Emmett, M.D., Clifton Forge

Recess to Visit Exhibits

CURRENT TRENDS IN SURGERY OF THE COLON AND RECTUM FOR CANCER—A. Stephens Graham, M.D., Richmond

There exists a decided trend toward avoidance of either temporary or permanent colostomy in the surgical treatment of cancer of the colon and rectum. This trend is considered critically from the standpoint of immediate and remote mortality (recurrence).

Discussion—R. L. Payne, M.D., Norfolk.

THE NEED IN VIRGINIA FOR TRAINED MEDICAL PHYSICIAN ANESTHETISTS—Harry J. Warthen, M.D., Richmond.

Hospitals in Virginia have not utilized the services of trained medical anesthetists to the same extent as hospitals elsewhere. More widespread use will result in greater safety for operative patients.

Discussion—E. C. Drasch, M.D., Charlottesville

THE TREATMENT OF BURNS—Charles Hamilton Lupton, M.D., Norfolk

Burns are surgical emergencies. Both the local and general treatments must be started promptly. Modified M.C.V. ointment with compression is recommended for the local treatment. Plasma should be given early and in adequate amounts. (*Lantern slides.*)

Discussion—Everett I. Evans, M.D., Richmond
J. G. Price, M.D., Norfolk

Monday, October 14

6:30 P.M.

South Porch of Dining Room

DINNER—Alumni Association, Medical College of Virginia

Monday, October 14
8:00 P.M.
Ballroom

Call to Order—A. BROWNLEY HODGES, M.D., Chairman, Committee on Arrangements

Invocation

Announcements

Introduction of President

President's Address—JULIAN L. RAWLS, M.D., Norfolk

Memorial Hour—A. M. SHOWALTER, M.D., Christiansburg, Chairman Membership Committee

Address by Guest—JOSEPH S. LAWRENCE, M.D., Director, Council on Medical Service and Public Relations, American Medical Association

Address—WALTER B. MARTIN, M.D., Norfolk, Member of A.M.A. Committee on Medical Service and Public Relations

Tuesday, October 15
9:15 A.M.
Ballroom

UNUSUAL TUMORS OF THE ABDOMEN—Russell Buxton, M.D., Newport News

This paper is devoted to presenting cases where chief physical finding was a tumor in the upper abdomen. The final diagnoses of the cases vary widely and for this reason it is felt that they are of general interest.

Discussion—A. A. Creecy, M.D., Newport News

SURGICAL TREATMENT OF HYPERTENSION AND PERIPHERAL VASCULAR DISEASE — Everett Idris Evans, M.D., Richmond

A report on the influence of sympathectomy on a group of thirty adult patients with hypertension who have been followed from one to three years, post-operatively. All patients have undergone sympathectomy of the Smithwick type; all have had kidney biopsy for correlation with eye-ground findings. *(Lantern slides.)*

Discussion—Nathan Bloom, M.D., Richmond
L. C. Brawner, M.D., Richmond

PRIMARY CARCINOMA OF THE LUNG—Frank Philip Coleman, M.D., Richmond

Eighty-eight consecutive histologically proven carcinomas of the lung were studied relative to symptoms, diagnosis and treatment. The early and late results of lung resections are given and offer considerable encouragement to the management of primary carcinomas of the lung.

Discussion—Arthur B. Gathright, M.D., Richmond

Recess to Visit Exhibits

PENICILLIN IN SYPHILIS—E. E. Barksdale, M.D., Washington, D. C.

The spirocheticidal effect of Penicillins G, F, X and K. The value of Penicillin in the treatment of early syphilis and its expected relapse rate. The use of Penicillin in the treatment of latent and late syphilis. The reaction which may be expected in a Penicillin-treated patient.

Discussion—Thomas Murrell, M.D., Richmond
E. M. Holmes, M.D., Richmond

LUNG ABSCESS IN INFANTS AND CHILDREN. TREATMENT WITH PENICILLIN—George A. Welchons, M.D., and E. L. Kendig, M.D., Richmond

The results obtained in the treatment of lung abscesses in infants and children have been considered by most writers to be of rare occurrence. A review of the literature does not substantiate this assumption. An outline of treatment is presented. Report of three cases. *(Lantern slides.)*

Discussion—I. A. Bigger, M.D., Richmond

PRACTICE OF PSYCHOSOMATIC MEDICINE—John F. Williams, M.D., Richmond

Diagnosis, management and results of treatment of patients with psychosomatic illness based on analysis of selected case reports. *(Lantern slides.)*

Discussion—Howard Masters, M.D., Richmond

Tuesday, October 15
1:15 P.M.
South Porch of Dining Room
Luncheon Meetings of Special Societies

Tuesday, October 15
3:00 P.M.
Ballroom

GASTROSCOPY: AN AID IN THE DIAGNOSIS OF OCCULT HEMATEMESIS—Charles M. Caravati, M.D., and James M. MacMillan, M.D., Richmond

History, physical examination, and x-ray fail to show the origin of the bleeding in many cases of upper digestive tract hemorrhage. Gastroscopy will visualize the site of hemorrhage in many of these cases. Case reports and slides will demonstrate this.

Discussion—D. Coleman Booker, M.D., Richmond

INFECTIOUS HEPATITIS—M. Morris Pinckney, M.D., James O. Burke, Jr., M.D., W. Taliaferro Thompson, M.D., and H. St. George Tucker, M.D., Richmond

Infectious hepatitis, as seen in an overseas general hospital is discussed, the etiology, epidemiology, clinical course, laboratory studies, treatment and criteria for cure being emphasized. *(Lantern slide.)*

Discussion—John Powell Williams, M.D., Richmond

THE COSEASONAL TREATMENT OF HAY FEVER—John L. Guerrant, M.D., and Oscar Swineford, Jr., M.D., University

Methods used at the University of Virginia Allergy Clinic. Analysis of 100 cases with emphasis on results and on factors which might influence the results. *(Lantern slides.)*

Discussion—J. Warrick Thomas, M.D., Richmond.

Recess to Visit Exhibits

PRESENT STATUS OF SHOCK THERAPY—R. Finley Gayle, Jr., M.D., and Claude L. Neale, M.D., Richmond

A report of the results, both good and bad, by the use of insulin, metrazol and electric shock therapy is presented. The evaluation of the results is critically made, and the hazards of the procedure are discussed.

Discussion—Frank H. Redwood, M.D., Norfolk
Joseph E. Barrett, M.D., Williamsburg

THE DIAGNOSIS AND TREATMENT OF HERNIATED NUCLEUS PULPOSUS—James L. Thomson, M.D., Norfolk.

By discussion and lantern slides, particular attention is directed to the history, neurologic findings, and operative procedures for the common location of herniated nucleus pulposus.

Discussion—J. M. Meredith, M.D., Richmond

SEVERE AND FATAL RHEUMATIC FEVER WITH PANCARDITIS IN VIRGINIA—Paul D. Camp, M.D., and Louise Galvin, M.D., Richmond.

Statistics and illustrated cases concerning incidence and severity of fatal and near fatal rheumatic fever and pancarditis in children in Virginia are presented.

Discussion—Samuel A. Anderson, Jr., M.D., Richmond
Walter B. Martin, M.D., Norfolk.

Tuesday, October 15
7:00 P.M.

Dinner

Address by Guest—GEORGE F. LULL, M.D., Secretary and General Manager, American Medical Association

Entertainment

Wednesday, October 16
9:15 A.M.
Ballroom

Symposium on General Practice

PEDIATRICS AS IT RELATES TO THE GENERAL PRACTITIONER—Basil B. Jones, M.D., Richmond

CAN OBSTETRIC CARE BE IMPROVED?—A. L. Carson, M.D., Richmond

ORTHOPEDICS AS IT RELATES TO THE GENERAL PRACTITIONER—George A. Duncan, M.D., Norfolk

NEUROPSYCHIATRY AS IT RELATES TO THE GENERAL PRACTITIONER—J. R. Blalock, M.D., Marion

HYPERTENSIVE VASCULAR DISEASE: ITS EVALUATION AND MANAGEMENT—Julian R. Beckwith, M.D., Clifton Forge

LABORATORY AND DIAGNOSTIC METHODS OF INTEREST TO THE GENERAL PRACTITIONER—Walter B. Martin, M.D., Norfolk

GENERAL DISCUSSION

Installation of W. L. POWELL, M.D., as President.

Adjournment

TECHNICAL EXHIBITS

Technical exhibits will be set up in the South and East Porches and the Loggia. The following is a list of exhibitors, with a brief description of each exhibit:

Booth No. 1

Van Pelt and Brown, Incorporated
Richmond, Virginia

Van Pelt & Brown, Incorporated, manufacturing pharmacists, will occupy exhibition space No. 1. Mr. George J. Hulcher will have charge of the display. Van Pelt and Brown, Prescription Specialties will be featured, especially Gluco Ferrum—the finest type of Iron Medication. We hope to greet all of our old friends and make new ones.

Booth No. 2

Powers and Anderson, Incorporated
Richmond, Virginia

This corporation was established in 1899 with the purchase of a small business located in Richmond a few years previous. known as the Bartlett-Garvens and Company. We think that we are one of the largest and one of the oldest hospital and physicians supply houses in the South. Our business has grown to such an extent that we have started subsidiary companies, one in Norfolk; one in Winston-Salem, North Carolina; and one in Columbia, South Carolina. We are now distributors of the Scanlan-Morris and Company, manufacturers of hospital operating and sterilizer equipment, and the Simmons Company, manufacturers of bedroom equipment.

Booth No. 3

White Laboratories, Incorporated
Newark, New Jersey

White Laboratories, Incorporated, present information regarding White's Sulfathiazole Gum—expressly formulated for topical chemotherapy in oropharyngeal infections; White's Otomide—a more effective means of topical chemotherapy in ear infections—and a NEW specialty, White's Mol-Iron Tablets, a new and definite advance in the treatment of iron deficiency anemias.

White's ethically promoted vitamin specialties are also

featured. You will find a very cordial welcome by White's Medical Service Representatives in charge of the exhibits.

Booth No. 4

William P. Poythress and Company, Incorporated

Richmond, Virginia

A cordial welcome awaits you at the Poythress booth where trial supplies and descriptive literature on Solfoton, Antrocol, T C S, Uro-Phosphate, Panalgesic, Merpectogel, Bensulfoid, and P. M. N. Ointment are yours for the asking.

Booth No. 5

Ciba Pharmaceutical Products, Incorporated

Summit, New Jersey

Ciba invites you to visit its display at Booth No. 5. Among the products displayed will be *Pyribenzamine,* the new antibistaminic compound used in the treatment of allergies; *Privine,* a nasal vasoconstrictor; *Metandren* Linguets, a potent androgen for oral use; *Nupercaine,* a spinal anesthetic, and many others.

Drop in and discuss these products with our representative who will be ready to answer any questions you may have.

Booth No. 6

Doak Company, Incorporated

Cleveland, Ohio

Doak Company exhibits nationally known dermatological preparations. Each preparation is based on the late advances in chemistry and research in dermatology. Latest additions to the Doak Company specialties are: *Salinidol* (Salicylanilid and Carbowax) for ringworm of the scalp; *Prozemoil*—a skin cleanser without the use of water—for eczema; and *Tarpaste,* a carefully standardized distillate of true coal tar 5 per cent in a zinc oxide and starch paste for eczema. Clinical material and literature available upon request.

Booth No. 7

Burroughs Wellcome and Company

New York, New York

Burroughs Wellcome and Company cordially invite physicians to their exhibit of a representative group of fine pharmaceuticals and chemicals. Of particular interest are *Globin Insulin,* a new advance in diabetic control; *Digoxin,* a pure, stable, crystalline glycoside of Digitalis lanata, combining constant, uniform potency with rapidity of action; *"Dexin"* High Dextrin Carbohydrate, the milk modifier in which the non-fermentable portion predominates, and *"Lubafax"* Brand Surgical Lubricant, one of our newest preparations.

Booth No. 8

Liebel-Flarsheim Company

Cincinnati, Ohio

It will be a privilege for The Liebel-Flarsheim Company to exhibit their new SW-227 Frequency Controlled Short Wave Diathermy, Ultra-Violet Orificial Generators, and *Bovie* Electrosurgical Units at the 1946 Annual Meeting of the Medical Society of Virginia.

Mr. R. D. Armiger, district manager, and Mr. F. M. O'Connor, our Virginia representative, cordially invite you to visit booth 8 for examination and demonstration of the above equipment.

Booth No. 9

Philip Morris and Company

New York, New York

Philip Morris and Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

Booth No. 10

Peoples Drug Stores

Washington, D. C.

Peoples Service Drug Stores Prescription exhibit is based on the careful handling of the value of prescriptions filled in each Peoples Service Drug Store Prescription Department, together with an interesting showing of drugs and specialties. A representative of the Company will be present and will gladly give any information desired by physicians.

Booth No. 11

Coca-Cola Bottling Works, Incorporated

Norfolk, Virginia

Welcome to the Medical Convention at Virginia Beach!

We shall be looking for you at our booth with a frosty bottle of Coca-Cola. Stop by often and enjoy a Coke with us.

Booth No. 12

A. S. Aloe Company

St. Louis, Missouri

The Virginia representatives of the A. S. Aloe Company will be happy to meet their friends at Booth No. 12.

On display will be a cross section of medical and laboratory equipment and supplies. A large selection of army surplus items will be featured. These items are double-barrel bargains: first, because all of the items are new, first quality items selling at a fraction of their usual cost; and second, because they are immediately deliverable.

You will be well repaid for your visit to Booth No. 12.

Booth No. 13

U. S. Vitamin Corporation

New York, New York

Full color illustrated brochure "Diagnosing Vitamin Deficiencies" together with professional samples and literature on Vi-Syneral, Poly-B, Vi-Litron, Hypervitam, Lipo-Heplex, Dalsol, Desiver and others.

Booth No. 14

E. R. Squibb and Sons

New York, New York

An exhibit showing the blood levels produced by Penicillin when administered in either Oil or Wax or in aqueous solution. Dosages for a variety of diseases are also shown.

Booth No. 15

Lanteen Medical Laboratories, Incorporated

Chicago, Illinois

This manufacturer will exhibit the improved *Lanteen Flat Spring Diaphragm, Hexestrol* (Lanteen), *Hexypheen* (Hexestrol with Phenobarbital), as well as *Vi-Teens* Products.

Included in their *Vi-Teens* display are *Vi-Teens Homogenized Vitamins,* a multi-vitamin palatable emulsion formulated for the dietary vitamin supplement for infants and children.

Booth No. 16

Holland-Rantos Company, Incorporated

New York, New York

You are cordially invited to visit the Holland-Rantos booth where on display will be the nationally known and universally used Koromex contraceptive specialties. Besides the new Koromex Set Complete, which is a package combining the necessary items for complete contraceptive technique, will be the new Nylmerate Jelly introduced only a short time ago and received enthusiastically for the treatment of trichomoniasis and vaginal discharges of a non-specific origin. Representatives of the company will be on hand to answer all questions. Samples of Nylmerate Jelly and Koramex Jelly will be available as will copies of the Dickinson-Freret Charts.

Booth No. 17

Valentine Meat-Juice Company

Richmond, Virginia

Valentine's, now celebrating its seventy-fifth anniversary in business, envisions increasing future service to the medical profession. Founded in 1871, its Meat and Liver Extracts are known and used all over the world.

Improvements in quality and variety of its products and processes are attested by increased prescribing of Valentine's Liver Products; wide acceptance of its Liver and Meat Extracts and Concentrates in bulk by the pharmaceutical trade.

Our ever increasing research facilities portend an assured progress in the development of other worthwhile products.

Booth No. 18

C. B. Fleet Company, Incorporated

Lynchburg, Virginia

Phospho-Soda (Fleet) has been an ethical product for over half a century. It is a highly concentrated, purified, aqueous solution of the two U.S.P. phosphates in stable form. It is rapid but mild in action, without irritation of the gastric or intestinal mucosa. It is indicated in hepatic and gall-bladder dysfunctions, and for a thorough eliminating and cleansing action on the upper and lower gut.

Booth No. 19

R. J. Strasenburgh Company

Rochester, New York

The R. J. Strasenburgh Company, founded in 1886, has been engaged in the development, manufacture, and distribution of ethical pharmaceutical specialties for the past sixty years. During these sixty years, sound research has made the R. J. Strasenburgh Company known to discriminating physicians as a source of dependable pharmaceuticals.

"Pioneered by Strasenburgh Research" has come to mean to the medical profession a quality product of proven value.

Booth No. 20

Schering Corporation

Bloomfield, New Jersey

The Schering exhibit will feature the latest developments in endocrine therapy, radiographic aids and other pharmaceutical advances.

Of particular interest is the presentation of Combisul-TD. Combisul-TD is a sulfonamide combination based upon the now proved therapy which offers the therapeutic benefits of sulfathiazole and sulfadiazine with a material decrease in the danger of renal toxicity and crystalluria.

Schering professional service representatives will be present to answer inquiries and to provide valuable, informative literature.

Booth No. 21

The Doho Chemical Corporation

New York, New York

The makers of *Auralgan* are introducing at this meeting their new sulfa drug preparation *O-Tos-Mo-San,* indicated in the treatment and control of chronic suppurative ears. Our representatives will be happy to explain, in detail, the workings of these medications.

Also to distribute our latest series of three Anatomico-Pathologic Charts of the Ear, in color, suitable for framing.

Booth No. 22

Parke, Davis and Company

Detroit, Michigan

Representatives of Parke, Davis and Company, well informed concerning progress in pharmaceutical research, and desirous of presenting new advancements to you, will be in attendance at our Technical Exhibit to discuss the nature and employment of new and present products. Displayed will be such outstanding products as *Theelin, Mapharsen,* and *Adrenalin Preparations.* The latest type of Biologicals will be on display. Likewise, Penicillin and other therapeutic agents of antibiotic, biological, and chemotherapeutic interest will be shown. We sincerely invite your visit to this exhibit.

Booth No. 23

A. H. Robins Company

Richmond, Virginia

The firm of A. H. Robins Company is one of the oldest pharmaceutical houses in the state of Virginia. It was founded in the year 1878 and has served the medical profession continuously since that time. In recent years the medical service staff has been increased so that practically every section of the United States is now covered by Robins' men.

E. C. Robins, who is president of the Company, is the grandson of the founder, A. H. Robins. Mr. Robins is a graduate of the Medical College of Virginia School of Pharmacy.

Booth No. 24

Reed and Carnrick

Jersey City, New Jersey

Since 1860 the high ethical and scientific ideals of the Reed and Carnrick Laboratories have continued to merit the confidence and support of the American medical profession.

Scientific research and rigid technical supervision assure the potency, clinical efficacy and economy of all medicinal agents bearing the name.

Booth No. 26

Hoffman La Roche, Incorporated

Nutley, New Jersey

Pharmaceutical prescription specialties of rare quality produced at Roche Park, where vitamins are made by the ton, will be exhibited. The medical profession's interest in *Per-Os-Cillin,* the new stable oral penicillin; the versatile parasympathetic stimulant prostigmin; and other scientific accomplishments will be satisfied by Hoffmann-LaRoche representatives who will be in attendance to discuss clinical problems.

Booth No. 27

Winthrop Chemical Company, Incorporated

New York, New York

Winthrop Chemical Company, Incorporated, extends a cordial invitation to visit Booth No. 27 where representatives will gladly discuss the latest therapeutic contribution made by this firm.

Booth No. 28

Sharp and Dohme, Incorporated

Philadelphia, Pennsylvania

Sharp and Dohme will have on display at their exhibit space the following products: *Sulfathalidine, Sulfasuxidine, Lyovac* Normal Human Plasma, *Prothricin, Tyroderm* Tyrothricin Cream.

A cordial welcome awaits all visitors.

Booth No. 29

The Borden Company

New York, New York

Spend a few minutes with Borden at Booth No. 29—refresh your memory on our Prescription Products. Meet Biolac, a concentrated liquid modified milk for infant feeding; New Improved Dryco with its high protein-low fat content for formula flexibility; Mull-Soy, liquid, emulsified soy food for your milk allergic patients; powdered whole milk Klim, a dependable source of whole milk; the improved milk sugar, Beta Lactose for carbohydrate supplementation; and the powdered Merrell-Soule Protein and Lactic Acid milks for special infant feeding cases.

Booth No. 30

Camel Cigarettes

New York, New York

Camel Cigarettes will present a dramatic full color review of their recent medical research on smoking, as well as the details of the nationwide survey showing that "More Doctors Smoke Camels Than Any Other Cigarette". Another panel will illustrate the absorption of nicotine in the respiratory tract. Representatives will be present.

Booth No. 31

General Electric X-Ray Corporation

Chicago, Illinois

The coming meeting marks the twentieth consecutive year that the General Electric X-Ray Corporation has had the privilege of an exhibit at the annual meeting of the Medical Society of Virginia. New models of physical therapy equipment and x-ray accessories will be on display.

Booth No. 32

Mead Johnson and Company

Evansville, Indiana

"Servamus Fidem" means We are Keeping the Faith. Almost every physician thinks of Mead Johnson & Company as the maker of Dextri-Maltose, Pablum, Oleum Percomorphum, and other infant diet materials—including the new precooked oatmeal cereal, Pabena. But not all physicians are aware of the many helpful services this progressive Company offers physicians. A visit to Booth No. 32 will be time well spent.

Booth No. 33

Tablerock Laboratories

Greenville, South Carolina

We invite the members of the Medical Society of Virginia to visit our exhibit during the meeting. Our representative will be glad to explain the line of prescription specialties we have to offer for your service.

Booth No. 34

Bilhuber-Knoll Corporation

Orange, New Jersey

Among the fine medicinal chemicals displayed by Bilhuber-Knoll Corporation are Metrazol, circulatory and respiratory restorative and antianoxiant; Octin, antispasmodic in ureteral and like spasms; Dilaudid, analgesic and cough sedative; Theocalcin, myocardial stimu-

lant and diuretic; Bromural, sedative and mild hypnotic; Euresol pro capillis, and other dependable products.

These prescription chemicals are often components of everyday prescriptions, prescribed alone or in combination with other drugs as the individual patient may require.

Booth No. 35

Ortho Pharmaceutical Corporation

Linden, New Jersey

The Ortho Pharmaceutical Corporation will exhibit their well-known line of gynecic pharmaceuticals. Featured will be their new product for treatment of bacterial vaginitis—Triple Sulfa Vaginal Cream.

You are cordially invited to visit booth No. 35. Samples and literature on all products will be available upon request.

Booth No. 36

Eli Lilly and Company

Indianapolis, Indiana

The Lilly exhibit will feature an interesting demonstration in miniature on penicillin culture. Many Lilly products will be on display, and attending Lilly medical service representatives will be present to assist visiting physicians in every possible way.

Booth No. 37

Meridian Electronic Equipment Company

Richmond, Virginia

Intercommunication, sound and paging systems for office and hospital use will be arranged so as to vividly describe the many possibilities of efficiency and convenience inherent in this type of equipment. The physician will be shown how his personal time and thousands of steps of his assistants can be saved; how doctors and nurses may be paged; how individual patients can have radio programs; and other devices whereby the profession can render even more efficient service.

Booth No. 38

J. B. Lippincott Company

Philadelphia, Pennsylvania

Be sure to see the current issue of *American Practitioner*—a new medical journal designed to shorten the lag between experiment and practice.

Titles of new books and new editions now ready or in active preparation include: Operative Gynecology; History of Medicine; Diabetic Care in Pictures; Diagnostic Examination of the Eye; Surgical Treatment of the Motor-Skeletal System; Surgical Treatment of the Nervous System; Treatment of Bronchial Asthma, and Pitkin's Conduction Anesthesia.

WOMAN'S AUXILIARY
to the
MEDICAL SOCIETY OF VIRGINIA

President—MRS. PEYTON MONCURE CHICHESTER, Richmond
President-Elect—MRS. J. E. HAMNER, Petersburg
Recording Secretary—MRS. NATHAN SCHUMAN, Alexandria
Corresponding Secretary—MRS. L. C. BRAWNER, Richmond
Treasurer—MRS. REUBEN F. SIMMS, Richmond
Parliamentarian—MRS. E. LATANE FLANAGAN, Richmond
Historian—MRS. H. A. LATANE, Alexandria

PROGRAM (Tentative)

Twenty-fourth Annual Meeting

Virginia Beach October 15, 1946

Headquarters: Cavalier Hotel

A cordial invitation to attend the meetings and entertainments is extended to every woman attending the Convention.

Registration begins on the afternoon preceding the opening meeting, and each woman is requested to register promptly upon arrival, either as delegate or visitor. (Registration fee—25 cents).

Registration Booth open Monday, October 14, from 5:00 P. M. to 6:00 P. M. and from 7:30 P. M. to 8:30 P. M.

CHAIRMAN OF LOCAL ARRANGEMENTS—Mrs. H. F. Dormire.

Tuesday, October 15

8:00 A.M.—Registration Booth open. Cavalier Hotel.

9:00 A.M.—Pre-Convention Board Meeting.

All local Presidents, Presidents-Elect (or Vice-President where there is no President-Elect), State Officers and Chairmen are expected to attend this meeting.

GENERAL ANNUAL MEETING

10:00 A.M.—Cavalier Hotel.

Open to all women attending the Convention.

Mrs. Peyton Moncure Chichester, President, presiding.

Invocation.

Address of Welcome.

Response.

Report of Committee on Arrangements—Mrs. H. F. Dormire, Chairman.

Report of Committee on Registration and Credentials.

In Memoriam.

Minutes of the Twenty-third Annual Convention.

Minutes of the Post-Convention Board Meeting.

Minutes of the Mid-Winter Board Meeting.

Roll Call of Local Auxiliaries—Mrs. Nathan Schuman, Recording Secretary.

President's Message—Mrs. Peyton Moncure Chichester.

President's Announcements.

Reports of officers and chairmen of standing committees.

Reports of local Presidents.

Report of delegate to the Woman's Auxiliary to the Southern Medical Association.

Unfinished Business.

New Business.

Recommendations from the Board.

Presentation of Membership Trophy.

Acceptance of Trophy.

REPORTS—

Committee on Resolutions.

Nominating Committee — Mrs. Paul Pearson, Chairman.

Election of Officers.

Installation of Officers, Mrs. E. Latane Flanagan, Parliamentarian.

Presentation of Gavel.

Adjournment.

LUNCHEON MEETING

1:30 P.M.—"Auxiliary Day" Luncheon (subscription) honoring especially invited guests of the Medical Society and Auxiliary with their husbands and wives; honorary Auxiliary members (Miss Agnes Edwards and Mrs. William Lett Harris); past Presidents of the Auxiliary; the retiring and incoming Presidents of the Medical Society and their wives; the Presidents of the Auxiliaries to the American Medical Association and the Southern Medical Association and the members of the Advisory Council and their wives.

Greetings—Dr. Julian Rawls, President Medical Society of Virginia.

Inaugural Address of President—Mrs. J. E. Hamner.

Guest Speakers

3:00 P.M.—Post Convention Board Meeting.

7:00 P.M.—Banquet of the Medical Society of Virginia and Auxiliary to the Medical Society of Virginia.

EDITORIAL

The Annual Meeting

THE first post-war meeting of the Medical Society of Virginia, October 14, 15, and 16th, promises to break all attendance records. The medical profession is *meeting-hungry*. Doctors who have been separated by the war will have an opportunity to get together under ideal surroundings. Those who know, say the Beach is at its best in October. It is not too late to go swimming, and is cool enough just to sit and enjoy living. The golfers and fishermen will have splendid opportunities to indulge in their favorite sport. And last, but not least, a splendid scientific program has been arranged, and there will be all the exhibits that space will permit. The Special Societies will meet in groups for luncheon on Tuesday, the 15th.

The Cavalier has been "sold out" for weeks, but good accommodations may be had at several other hotels.

Dr. Riggin Resigns as Health Commissioner

DR. I. C. RIGGIN resigned as State Health Commissioner August 7th, the position which he had filled since 1934. At that time he succeeded Dr. Warren F. Draper who had been loaned to Virginia by the United States Public Health Service.

Among the first of the activities undertaken by Dr. Riggin was to discuss with and to acquaint the medical profession of Virginia with the programs which should be carried on. Thus, there was established a mutual understanding between the doctors of the state and the health department. This understanding of the work and the problems facing both the medical profession and the state health department has resulted in exceptional progress toward the common goal of providing a medical service for the people.

The cooperation of the medical society in the activities of the state health department during the period which Dr. Riggin served as State Health Commissioner can be illustrated by the expansion of the former programs as well as by the inauguration of a number of new services. Local health departments have increased from sixteen to a coverage of fifty-one counties at the present time. Tuberculosis control work was expanded. Three additional infirmary buildings for treatment of tuberculosis were constructed and pneumothorax stations were established throughout the state. A rheumatic fever study among children was undertaken and a program of control and treatment for children suffering with this condition was instituted. State-wide maternal and child health clinics and venereal disease clinics were established with the physicians acting as clinicians at these centers. Reference should also be made to a plan that was devised with the local welfare committee for the hospitalization of mothers needing hospital care and unable to pay for it. (See *The Virginia Medical Monthly*, 72:181, April 1945.) So far as we know such a service had not been given in any other state.

A bureau of industrial hygiene was set up which along with its other activities carries on a program of mass-x-raying of the industrial population. Many studies have been undertaken by the medical profession in conjunction with the health department.

Dr. Riggin has taken an active part in the work of the Medical Society, serving as a member of a number of standing and special committees. In reflecting upon the contribution Dr. Riggin has made in his various committee capacities, it is hoped that Virginia may be so fortunate as to find him continuing these.

Dr. L. J. Roper of Portsmouth and Richmond, who has been with the State Health Department since 1936, and who, from July 1, 1919, was City Health Officer of Portsmouth, was appointed State Health Commissioner August 7th. We bespeak the hearty cooperation with the new administration.

The San Francisco Meeting

THE meeting of the American Medical Association was a tremendous success. According to the newspapers it brought fifteen thousand people to San Francisco. Our first impression, on looking over the exhibits, was that we knew little about modern medicine. Bewildering charts and strange-looking machines were seen on every hand. We were intrigued by a pulsating perfusion apparatus. We could not learn how it worked, much less what it did, besides sending a drop of colored fluid up and down through a lot of tubing. Technicians were performing a lot of *simple* tests everywhere. There were two Rh determination stations and both had queues of waiting women, although the test took only six minutes. The Navy showed, among other things, an apparatus that took miniature lung films of every patient on admission to the hospital, which they claimed would disclose many unsuspected heart and lung conditions. We were reminded of a conversation we had with a doctor on a sightseeing bus in Los Angeles. His son was captured in the Battle of the Bulge. He was especially badly treated by the Nazis as he made a nearly-successful escape. When he came home he was a mere shadow of his former self and was suffering severe pains particularly in his abdomen. He was sent from Army Hospital to Army Hospital and finally an operation for appendicitis was done. It looked as if he must surely die, when the doctor took him out of Army care and sent him to the Mayo Clinic, which was near his home. Here an X-ray, which was the first that had been taken, revealed acute tuberculosis. He was treated with streptomycin as a last resort experiment, and made a miraculous and rapid recovery.

Considerable space was given over to physical therapy and rehabilitation technics. A comely model, who evidently needed no rehabilitation, was having her various muscles tested electronically. The technical exhibits were equally impressive, although less confusing, and the art exhibit was the best they had ever had, although we did not have time to get around to that. There was simply too much to see and learn in five days.

The section on the Practice of Medicine, which is a new section of the A. M. A., was in an out of the way place and in a hall where "No Smoking" was strictly enforced. Never-the-less, it was well attended. Our neighbor, Wingate Johnson, presided with great dignity and efficiency, maintaining proper decorum. He allowed all relevant discussion and at the same time got through with the program on schedule. It looks as though the general practitioner has won for himself a permanent place in the A. M. A.'s scientific assembly.

As to the other part of the scientific program, Milton Silverman, Science Editor of the *San Francisco Chronicle*, gave the following summary:

At the end of their five-day meeting and of special meetings which preceded the AMA, here are the outstanding conclusions:

CANCER—No simple cure has yet been found. Surgery, X-ray and radium remain unsurpassed for the deep-seated, deadly cancers. For the treatment of less deadly skin cancers, radioactive phosphorus may be as good as the older curative agents—but, so far as is known now, no better.

TUBERCULOSIS—For the treatment of pulmonary tuberculosis the value of streptomycin—so-called "wonder drug"—has not been established.

HEART DISEASE—No heart disease victim may expect to live longer or more comfortably with

the aid of any new drug reported here last week. Tobacco as a major cause of heart disease was "proved" in one report, "disproved" in another, remains an open question.

SYPHILIS—Penicillin offers hope for an easier, quicker cure, but it is not the absolute magic bullet against this disease. Other drugs—notably arsenic and bismuth compounds—still must be used. A new diagnostic method—the "cardiolipin" test—appears to be the most accurate ever devised for syphilis.

MALARIA—Quinine, long-known to be valuable, but not perfect, appears to be surpassed by atabrine and newly discovered chloroquine and SN-13276.

POLIOMYELITIS—No cure has been found for infantile paralysis. The "Sister Kenny method" has still not been overwhelmingly accepted.

STOMACH ULCERS—No sure cure, no sure preventive, no certain cause.

CHILDBIRTH PAIN—The relatively new caudal anesthesia—injection of the anesthetic agent at the base of the spine—is good, but not as good as some of its adherents once claimed.

SKIN INFECTIONS—For wound and skin infections, new furacin may be even better than penicillin and the sulpha drugs. Also, it may not. Its nomination to the exclusive club of "miracle drugs" waits on thousands of additional patients.

MENTAL DISEASE—For petit mal—the minor form of epilepsy—treatment with tridione has unquestionably been helpful. For other mental diseases, assessment of most new treatments awaits more evidence than a doctor's report of "my series of two cases."

To medical scientists, it had been disappointing.

Out of several hundred reports, few were new, few were significant, few were brilliant. The enthusiastically heralded war-time discoveries—with a few important exceptions—failed to appear.

By and large, it seemed, the men who since Pearl Harbor had been reputedly too busy to report their discoveries had actually been too busy to make any.

SOCIETIES

Augusta County Medical Society.

At the August meeting of this Society, Dr. G. Edmund Stone, Staunton, was elected as president, succeeding Dr. John H. Guss. Other officers are: vice-presidents, Drs. William Lueders, Staunton, Paul A. Woods, Waynesboro, and Charles F. Gaylord, Staunton; secretary, Dr. B. H. Payne, Staunton; treasurer, Dr. John Womack, Staunton; and censor, Dr. Lyle S. Booker, Waynesboro.

Bedford County Medical Society.

At the May meeting of this Society, Dr. Bernard H. Kyle, Lynchburg, gave a very interesting paper on "Injuries to the Intervertebral Disc and Low Back Pain."

Dr. J. G. Jantz is president and Dr. W. G. Hardy, secretary-treasurer. Both are of Bedford.

The Buchanan-Dickenson Medical Society

Met on July 24th at which time it celebrated "Ladies Night". Dr. Frank Philip Coleman, Richmond, read a paper on "Cancer of the Lung." He detailed a series of 17 total pneumonectomies for cancer of the lung, in which nine of the patients are alive and well without recurrence to date. In the afternoon Dr. Coleman gave a surgical clinic at the Grundy Hospital for doctors of Dickenson, Tazewell and Buchanan counties.

Dr. C. H. Reagan, Grundy, is president of this Society, and Dr. T. C. Sutherland, Haysi, secretary.

Fredericksburg Medical Society.

Officers of this Society are: President, Dr. Claude A. Nunnally; vice-president, Dr. W. W. Butzner; and secretary-treasurer, Dr. L. A. Busch. All are of Fredericksburg.

Norfolk County Medical Society.

At the annual meeting of this Society held in June, Dr. Bryant E. Harrell succeeded Dr. Foy Vann to the presidency, and the following officers were elected: president-elect, Dr. Millard B. Savage; vice-president, Dr. George A. Duncan; and secretary-treasurer, Dr. Lockburn B. Scott, re-elected for the twenty-seventh consecutive year. Delegates to the annual convention of the State Society were also named.

Northampton County Medical Society.

Dr. Charles T. Garcia, Cape Charles, has been elected secretary of this Society for the balance of 1946. Dr. J. R. Hamilton, Nassawadox, is president.

NEWS

Guests at the Virginia Beach Meeting.

All indications point to a most excellent meeting of the Medical Society of Virginia at Virginia Beach on October 14, 15 and 16, under the presidency of Dr. Julian L. Rawls of Norfolk. Matters of importance will be discussed in the business sessions as well as through the many scientific papers to be presented.

Guests at the meeting are to be Dr. George F. Lull, Secretary and General Manager of the American Medical Association, and Dr. Joseph S. Lawrence, Director of the Washington Office of the Council on Medical Service and Public Relations of the Association. Dr. Lawrence will speak on Monday evening and Dr. Lull on Tuesday evening following the banquet.

The Medical College of Virginia has arranged for a dinner gathering on Monday evening and groups of doctors in the Speciality Societies will have lunch together on Tuesday.

A number of exhibits will add to the interest of the meeting, as well as the many attractions offered by the Cavalier and Virginia Beach. It is hoped that many members who cannot stay for the whole time of the meeting may come to the Beach for one or more sessions. This will be a wonderful opportunity to meet with friends, many of whom have been in Service for several years.

Personnel Changes in State Health Department.

Dr. I. C. Riggin, State Health Commissioner since 1934, resigned as of August 7th.

Dr. L. J. Roper, State Director of Rural Health Services, was appointed State Health Commissioner, as of August 7th, by Governor Tuck.

Drs. P. M. Chichester and J. C. Neale, Jr., will alternate in directing the work of the Department of Rural Health which was headed by Dr. Roper.

Released from Service.

Dr. E. E. Barksdale, formerly of Danville, is now located in Washington, following his release from the Navy.

Dr. William D. Chase, formerly of Fairfax, is now associated with the Veterans Hospital in Reno, Nevada, since his discharge from the Army.

Dr. Hal S. Johnson is associated with Dr. J. R. Grinels, Richmond, in general practice. Before entering the Army he was located at Patterson.

Dr. William T. Pugh, Lynchburg, has returned to his practice and has offices in the Allied Arts Building.

Dr. A. C. Ray, Jr., has been released from Service and is back in Ashland.

Dr. George Zur Williams has been separated from the Navy and is back at the Medical College of Virginia, Richmond.

Dr. William R. Bishop, Front Royal.

Dr. Ben L. Boynton, Norfolk.

Dr. Jean B. Des Rochers, Roanoke (now San Antonio, Texas).

Dr. Henkel M. Price, Martinsville.

Dr. William W. Taylor, Norfolk.

Dr. Glenn L. Walker, Roanoke.

Post Graduate Course In Ophthalmology and Otolaryngology.

The next post graduate course will be held at the University of Virginia on December 9th and 10th for ophthalmology and 11th and 12th for otolaryngology. Several men of national prominence have already been secured.

Dr. James N. Dudley,

Former health commissioner of Newport News, resigned effective September 1st to accept a similar position with the City of Roanoke. He was with the State Health Department for ten years before going to Newport News in 1945.

Dr. Leta J. White

Has returned to her practice in Petersburg after an absence of three months. She visited her brother and sister in Bahia, Brazil, and while in South America visited Rio de Janeiro, Recife and points in the interior.

Dr. R. L. Raiford,

Franklin, attended the conference on Rural Medical Care sponsored by the Farm Foundation held at Chattanooga, June 25-28. He spoke on Group Medicine in a Rural Community.

University Hospital Opens New Floor.

The University of Virginia Hospital announces that it has recently opened another new floor, des-

ignated to the use of the Departments of Opthalmology and Otolarynology. These new wards have a total of thirty-six beds for white patients. They are in addition to the beds already available for pediatric and colored patients.

Dean Gray Resigns.

Dr. J. P. Gray, Dean of Medicine of the Medical College of Virginia, has resigned, effective September 16, to accept the position of dean of the school of medicine, director of the hospitals, and professor of public health medicine in the University of Oklahoma, School of Medicine, Oklahoma City. He has been with the Medical College of Virginia since July 1942.

Married.

Dr. L. Freeland Magruder, Portsmouth, and Miss Hattie Cridlin Taylor, Urbanna, July 29th.

Dr. Stuart Harrison Catron, Jr., Marion, and Miss Frazier Drumwright, Union Level, July 18th. He is a graduate of the Medical College of Virginia in March 1943, recently returned from overseas, and in now attached to the staff of McGuire General Hospital, Richmond.

The Southwestern Virginia Medical Society

Is to hold its Fall meeting at the Governor Tyler Hotel in Radford on October 3rd, the program starting at 2:00 p. m. The afternoon session will be given over to papers by members of the Society and, in the evening, the Society will have two guest speakers—Dr. Edward H. Dennen of New York City who will speak on The Use of Obstetrical Forceps, and Dr. James S. Speed of Memphis, Tenn., whose subject will be Orthopedic Problems.

Dr. A. P. Jones of Roanoke is president of this Society and Dr. A. F. Giesen of Radford, secretary-treasurer.

Dr. Charles F. Kincheloe,

Formerly of Falls Church, who has been taking "refresher" work in New York since being separated from the Service last January, has located in Alexandria with offices at 209 South Patrick Street, with also a Washington office, for orthopedic surgery exclusively. Before entering the Service, Dr. Kincheloe was engaged in special work in orthopedics in Pennsylvania and New York for three years.

Radio Series to be Sponsored by National Mental Health Foundation.

The National Mental Health Foundation is preparing to launch a series of professionally produced radio plays designed specifically to educate the American public to a sound and sympathetic approach towards mental illness and related problems.

Beginning in September of this year and continuing monthly thereafter, the Foundation plans to release two open-end fifteen minute transcribed radio dramatizations—each dealing with a particular problem arising out of mental illness.

The first two in this series have already been transcribed at the studios of the National Broadcasting Company. They are:

THE STORY OF LOUISE MAPLETON—a dramatized case history which demonstrates what can be accomplished in an efficiently run, well-equipped state hospital for a person in an early stage of mental illness.

THE CASE OF CYNTHIA EDWARDS—another dramatized case history. This program demonstrates the therapeutic possibilities of foster home care for a mental patient during her convalescent period.

The third program in the series covers the almost tragic experiences of a fully recovered mental patient when he meets up with the many prevailing prejudices on mental illnesses in his own home town. The fourth is to deal with the relationship between patient and attendant and will dramatize the value of the properly trained and sympathetic attendant to the patients in his care. All of the programs will be on open-end transcriptions, so that sponsoring agencies will have an opportunity to make a locally pertinent message at the close of each program.

As it is planned to make these programs available for use at meetings, the programs will be reproduced on discs which can be played on any regular record player. Organizations and societies wishing further information about this series are requested to write to the Radio Section, The National Mental Health Foundation, Box 7574, Philadelphia 1, Pennsylvania.

International College at Detroit.

Detroit is host city to an outstanding group of surgeons and doctors at the Eleventh Annual As-

sembly of the United States Chapter, International College of Surgeons, at the Masonic Temple on October 21-22-23.

Featured at the impressive convocation on Tuesday evening, October 22 will be Joseph C. Grew, former Ambassador to Japan.

Sixty scientific speakers will present papers at the twenty four meetings scheduled.

If you plan to attend, write to Louis J. Gariepy, M.D., 16401 Grand River Avenue, Detroit 27, Michigan for a program and detailed information.

Dr. Julian B. Doss,

Roanoke, has discontinued private practice and accepted an appointment to the Staff of the Veterans Hospital in that city.

Dr. George H. Kinser,

Formerly of Waynesboro, is now at 1901 Sholars Street, Orange, Texas. He was transferred by DuPont Company as medical supervisor during the construction of a new nylon plant.

Portrait of Dr. Smith Presented Hospital.

An oil portrait of the late Dr. W. O. Smith was recently presented to the Piedmont General Hospital, Altavista. Dr. Smith practiced in Pittsylvania County and Altavista for more than forty years, having died in 1940.

The Piedmont Hospital was formally opened May 5, 1946. It has twenty-four beds and five bassinets and is under the direction of Dr. J. Paul Kent.

Dr. Lockburn B. Scott,

Norfolk, is spending the summer at his old home in Canada with members of his family still resident there.

Dr. Regena Beck's Laboratory,

1103 West Franklin Street, Richmond, has recently been approved by the State Department of Health for the performance of the Laughlen Flocculation Test and the Kolmer Complement Fixation Test for premarital examinations. This Laboratory will be added to the next list to be published by the Health Department.

New Quarterly Journal.

The publication of a new journal, the Quarterly Review of Dermatology and Syphilology, has just been announced by the Washington Institute of Medicine, Washington, D. C., as a notable event marking its fifteenth year in the fields of medical publication and library research.

This new publication is the tenth in the Washington Institute's group of Quarterly Reviews covering specialized fields of practice. It will survey all published material on Dermatology and Syphilology appearing anywhere in the world from January 1, 1946, onward, and will be the first review journal in its field ever to provide this truly complete coverage.

American Board of Obstetrics and Gynecology, Inc.

The next written examination (Part I) for all candidates will be held in various cities of the United States and Canada on February 7, 1947 at 2:00 P. M. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held later in the year. All applications must be in the office of the Secretary by November 1, 1946. Candidates in military service are requested to keep the Secretary's Office closely informed of changes in address.

Applications are now being received for the 1947 examinations. Final examinations will be held in Pittsburgh, Pa., June 1-7, 1947. For further information and application blanks address: Paul Titus, M.D., Secretary, 1015 Highland Building, Pittsburgh, 6, Pennsylvania.

Dr. O. Douglas Boyce,

Recently of Rural Retreat, is now located for practice in Gastonia, North Carolina.

Dr. R. Bruce Mallett,

Recently of Orange, is now located at 4644 31st Street, South, Arlington.

Fall Graduate Instructional Course in Allergy.

The American College of Allergists presents a Fall Graduate Instructional Course in Allergy under the auspices of the Jefferson Medical College of Philadelphia, November 4-9, inclusive. Headquarters will be at the Benjamin Franklin Hotel in that city. This course in allergy will consist of forty-six lectures and an afternoon laboratory session. These lectures will include fundamentals of allergy and allergy therapy.

Therapy in general will be discussed, the treat-

ment of special allergies, such as bacterial allergies, mold allergies, allergy to drugs and biological products, respiratory allergy including treatment with bronchoscopy and inhalation therapy, the treatment of medical emergencies in allergy, various skin manifestations of allergy, and allergy dealing with foods, migraine, Meniere's disease, ocular allergy, as well as uncommon manifestations of allergy.

Of the forty-six presentations the faculty consists of men representing seventeen different medical colleges, four clinics, as well as research workers, botanists, and other outstanding physicians in the field of allergy.

The fee for the course is $100. For those in or just returning from military service the tuition is reduced to $25. A limited number of scholarships are available to residents and internes interested in allergy or on an allergy service. Application for such scholarships should be made to the Office of the Secretary, 423 La Salle Medical Building, Minneapolis 2, Minnesota, and they will then be referred to the Committee for that purpose.

Dr. Walter Lewis Williams

And his brother, both of Brookneal, were recently honored by being presented with 50-year veteran membership jewels by the Staunton River Lodge number 155, A. F. & A. M.

Virginia Study of Child Health Services.

Since the progress report of last month, the Virginia Study of Child Health Services, sponsored by the American Academy of Pediatrics, has been moving rapidly toward completion.

Every physician and dentist in Virginia has received a questionnaire. The percentage of returns from these has already passed the 50 per cent mark.

Both phases of the Hospital Survey have made considerable progress in the past month. In the first phase, 94 per cent of the General and Maternity Hospitals have been surveyed by the Virginia Field Staff. In the second phase, conducted by the individual pediatricians, the following results have been obtained:

	Percentage Surveyed
General Hospitals	52
Nervous and Mental Hospitals	100
Tuberculosis Hospitals	86
Convalescent and Nursing Homes	79

Complete reports have been received from 92 per cent of the counties that have organized health departments.

Thus the overall progress of the Survey in the past 30 days has been good. However, there are still a large number of physicians and dentists who have not contributed their part to this concerted effort. It is urged that all of those who have not already done so, complete and return their questionnaires.

Twenty-Fifth Anniversary of the Discovery of Insulin.

The twenty-fifth anniversary of the discovery of Insulin will be observed with a program in Convocation Hall, at the University of Toronto, on September 16. Many Internationally known figures in the field of medicine will be present to honor the occasion. This observation will be followed by the regular annual meeting of the American Diabetes Association.

On September 23 Eli Lilly and Company will sponsor an International diabetes clinic to be held at the Indiana University Medical Center in Herty Hall of the State Board of Health Building, Indianapolis, Indiana. International importance will be given to this meeting by the presence of Professor Charles H. Best, Toronto, Canada, co-discoverer with Banting of Insulin, Professor Houssay, Dr. Lawrence, and Dr. Hagedorn. They will discuss various phases of diabetic care.

The Association of Military Surgeons.

Reservations already received for the convention of the Association of Military Surgeons of the United States to be held in Detroit on October 9th to October 11th inclusive, indicate that attendance this year will be unusually heavy. Therefore, all members planning to take part in the convention are urged to send in their reservations immediately so as to be sure of obtaining proper hotel accomodations. Dr. Carleton Fox, general convention chairman, announces that Lt. General Walton H. Walker, Commanding General of the fifth army, has accepted an invitation to serve as honorary chairman. Other members of the honorary committee are General Bliss, U. S. Army; Captain Cole, U. S. Navy; Dr. Williams, U. S. Public Health Service; and General Hawley, Veterans Administration, who will serve as vice chairman.

Dr. Joseph Krimsky,

Of Richmond and Charlottesville, has accepted an appointment with the Veterans Administration as chief of the eye, ear, nose and throat service in the Regional office at Huntington, W. Va.

Dr. Francis A. Hellebrandt,

Professor of Physical Medicine at the Medical College of Virginia, will have an exhibit, "Education in Physical Medicine", at the seventh annual Congress on Industrial Health, in Boston, September 30 through October 3.

New Superintendent at Eastern State Hospital.

Dr. Granville L. Jones of Marlboro, New Jersey, has been appointed superintendent of Eastern State Hospital at Williamsburg and will assume his duties there on or before September 15. He succeeds Dr. Joseph E. Barrett who, since the death of Dr. H. C. Henry, has served in the dual capacity of State Commissioner of Mental Hygiene and Hospitals and superintendent of that hospital.

Dr. Jones is a graduate in medicine of the University of Arkansas in the class of '28, and during the past fifteen years has been connected with the New Jersey State Hospital at Marlboro, first in mental hygiene work and later as clinical director.

The Cancer Committee

Of the Medical Society of Virginia wishes to call attention to a change in the method of procuring financial assistance for medically indigent cancer suspects and proven cancer patients from the Virginia Cancer Foundation.

Expenses for diagnosis and treatment may be paid by the Virginia Cancer Foundation at clinics certificated by the Cancer Committee for all patients whose medical indigence is certified by your local Welfare Department. The Welfare Department will make arrangements for patients to visit these clinics. In case of emergency, the patients will be accepted tentatively by the clinics until the Welfare Department has had an opportunity to make its investigation.

Dr. D. V. Kechele,

Recently of Richmond, is now with the X-Ray Department of St. Luke's Hospital, Bluefield, West Virginia.

Dr. Lewis K. Woodward, Jr.,

Announces the opening of an office for the practice of general surgery at the Cora Miller Memorial Hospital, Woodstock.

Dr. Dewey L. Anderson,

Recently located in Richmond, is now Medical Director of the Cooley Sanatorium at Monroe, Louisiana.

Dr. Eric C. Schelin,

Who was on the staff of the Medical College of Virginia hospitals from 1939 to 1942, announces his separation from the Army of the United States and the opening of his office in association with Dr. H. Hudnall Ware, Jr., and Dr. Washington C. Winn, at 816 West Franklin Street, Richmond. His practice will be limited to gynecology and obstetrics.

An Appointment in Pediatrics

Is available immediately at Raiford Clinic, Franklin, Virginia. Address the Administrator, Raiford Memorial Hospital, Franklin, for further details. (*Adv.*)

Wanted.

An Associate in surgery and general practice in a new twenty-seven bed hospital. Also to do some outside general practice. Apply to J. Paul Kent, M. D., Altavista, Virginia. (*Adv.*)

Established Hospital For Lease or Sale.

A Sanitarium for nervous, mental, alcoholic and drug cases doing an excellent business. Established in 1904. It is necessary to see the institution to appreciate its real value. Write Dr. E. W. Stokes, 923 Cherokee Rd., Louisville 4, Kentucky, for further information. (*Adv.*)

For Sale.

GE X-Ray, Model 1775; 30 ma; 85 KVP, table with Bucky; in excellent working condition. James P. King, M.D., Radford, Virginia. (*Adv.*)

An Appointment in E. E. N. and T.

Available October 1, 1946, at Raiford Clinic, Franklin, Virginia. Address the Administrator, Raiford Memorial Hospital, Franklin, for details. (*Adv.*)

NEW

SEARLE AMINOPHYLLIN SUPPOSITORIES

For more convenient and effective rectal administration of Aminophyllin,* Searle Research has produced

AMINOPHYLLIN SUPPOSICONES
(SEARLE BRAND OF AMINOPHYLLIN SUPPOSITORIES)

Differing from all other types of suppositories, Searle Aminophyllin Supposicones are molded with a new base material which liquefies rapidly in the rectum, permitting complete absorption of the Aminophyllin, but which remains *stable and solid at temperatures up to 130° F. outside the body.*

Searle Aminophyllin Supposicones are non-irritating to the rectal mucosa—require no anesthetic—are of proper size and shape for easy insertion and retention.
Each Aminophyllin Supposicone contains 500 mg. (7½ grs.) Searle Aminophyllin. Packaged in boxes of 12.

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SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

OBITUARIES

Dr. James Harmanson Mapp,

Buena Vista, died July 31, at the age of eighty, of a heart attack. He was graduated from the former College of Physicians and Surgeons, Baltimore, in 1888. Locating in Buena Vista in 1890, he was one of its pioneer citizens. He was one of the organizers of the Peoples Bank in 1906, and became its president six months later, a position he held until his death. He was a charter member of the Rotary Club, and one of the first masters of the Masons. He was for many years chairman of the Board of Health, and a member of the Medical Society of Virginia since beginning his practice. He is survived by his wife and two daughters.

Dr. John Daniel Thomas,

Washington, D. C., died on August 7th at the age of eighty. He was a native of Northampton County, Virginia, and graduated in medicine from the University of Virginia in 1892. He had been a member of the Medical Society of Virginia since 1909. He was formerly professor of Physical Diagnosis at Georgetown University. Since retirement several years ago, he had lived in Washington and with a son in Hilton Village, this State.

Dr. James Edwin Smith,

Petersburg, died August 15th. He was a native of Princess Anne County and seventy-three years of age. Dr. Smith graduated from the former University College of Medicine, Richmond, in 1900. He had practiced in Petersburg since that time and for the past five years had been on the staff of the Central State Hospital. Dr. Smith had been a member of the Medical Society of Virginia for forty-five years. A son and two daughters survive him.

The Petersburg Medical Faculty assembled in special meeting to pay tribute to the memory of its deceased member, Dr. James E. Smith, adopted the following:

We are gathered to pay tribute to the memory of our deceased friend and co-worker, Dr. James E. Smith, and record a simple testimonial to his personal and professional worth. Courteous, obliging and honorable, possessing generous impulses and a personality that inspired and retained true friendships; by nature genial and energetic, Dr. Smith was ever willing and ready to serve his fellowman. Public-spirited and progressive, a Christian in faith and works, he was a beloved and useful citizen. His broad, sympathetic, intense interest in anything that concerned human welfare and happiness and his untiring labors in behalf of the sick and afflicted, endeared him to the people throughout this community. Endowed with fine qualities of heart and head, he easily won our esteem and respect and impressed upon us the high order of his mentality. Truly, his enobling traits of character, his ideals, his good deeds and his zeal and skill as a physician deeply impressed and influenced us who were thrown with him frequently. Indeed in his death our profession loses one of its most esteemed and gifted members. Dr. Smith died at the end of a long useful and eminently successful career and will be greatly missed by a large and loyal clientele as well as his fellow physicians.

J. BOLLING JONES
D. D. WILLCOX
E. L. MCGILL

Resolutions on Dr. Rucker.

Dr. Moses Peter Rucker died in Bedford on April 4, 1946, from pneumonia, at the age of sixty-nine years. He had been in poor health for sometime, but he continued at work until a short while before his death.

Dr. Rucker graduated from the University of Maryland School of Medicine in 1904 and had been engaged in general practice in Bedford since his graduation.

He was a past president of the Bedford County Medical Society, a surgeon for the Norfolk and Western Railroad, and had been a member of the Medical Society of Virginia for thirty-one years.

The Bedford County Medical Society at its meeting on June 21, 1946, adopted the following resolutions:

BE IT RESOLVED that in the death of Dr. Rucker this society and community have lost a most skillful and successful doctor and friend, who administered to all who sought his aid, regardless of color or ability to pay.

IT IS FURTHER RESOLVED that a copy of these resolutions be published in the VIRGINIA MEDICAL MONTHLY, and that a copy be sent to his family, and also spread on the minutes of this Society.

E. L. JOHNSON
W. V. RUCKER
W. G. HARDY

THINK OF THE PATIENT *and* YOURSELF

With but one injection you can accomplish the effectiveness of eight. Administer the contents of one cartridge (1 cc.) of Penicillin in Oil and Wax and the patient has received 300,000 units of penicillin.

By using the cartridge, the physician can avail himself of the economical plastic syringe that can be thrown away after it's used. Or, just as time and trouble-saving —use the Metal Cartridge Syringe and get the most out of this new therapy.

PENICILLIN IN OIL AND WAX *Bristol*
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GUEST EDITORIAL

A Program for a Continuing Postgraduate Medical Education

THE quality of medical care in a community depends upon the extent to which its physicians "keep up" with medical progress. In other words it depends on the value placed by local physicians on a continuing medical education. Comparatively few physicians practice medicine as a "trade" or merely as a method of making a living. Even if they do not feel themselves qualified to push forward the frontiers of discovery, they are eager to learn from others new methods which they can put into practice for the benefit of their patients. When this thirst for knowledge ceases, the physician has one foot in the grave.

At the risk of oversimplyfying the problem, the following generalizations may be made.

1. Good medical care depends on good physicians.
2. Good physicians tend to settle in a community where good hospital facilities are accessible.
3. Hospital internes tend to settle in the neighborhood of their hospitals.
4. Good internes are attracted to hospitals where they can get a good education.

It follows, therefore, that the touchstone for high quality of medical care in a community is high quality interneships in its local hospitals.

Dr. Frank H. Lahey recently said that young physicians seeking hospital appointment rate available opportunities in the following order. First is variety of clinical material. Second is the opportunity for advancement (toward specialty board examinations for example) and last is the financial reward.

In setting up a teaching program in a hospital which has not previously embarked on such an undertaking, it is comforting to realize that the same clinical conferences, ward rounds, and other exercises which are produced for the education of the internes are found to be most attractive to the staff members as well. Medical education by the case method is peculiarly a give and take proposition. The young men come fresh from medical school with enthusiasm for this or that new method of investigation. Older staff members can learn from them and in exchange their enthusiasms can be tempered by the wisdom and experience of the older generation.

Community hospitals are increasingly becoming the medical education centers in which are centered the most consuming interests of the profession and it is hoped that the development of hospital and health center programs with the help of the Hill-Burton Bill funds will carry with it a sound educational program without which the system will not be satisfactory. Without losing their autonomy, small hospitals may take their place in affiliation with larger institutions to the advantage of both. For many years, services of pathologists and roentgenologists have been extended to small hos-

pitals which could not afford full time services in these specialties. We have seen these specialists team up with local physicians to conduct tumor clinics and clinical pathological conferences in the local hospitals.

The question may be asked, why could not visiting teachers be brought in the clinical branches as well as in the more technical fields of pathology and roentgenology. This can be done provided the surgeon or other specialist who comes from the outside comes as a teacher and neither in spirit nor in practice enters into competition with the local profession. He should not seek to augment his salary in any way by consultation fees. It is safe to say that local hospital staffs would welcome the opportunity of participating in regular clinical exercises conducted by representatives of neighboring medical school faculties.

If the staff of the local hospital has one or more members who are certified by one of the specialty boards, it should be possible even in a hospital of 35 to 50 beds to provide an intern service on rotation with one of the metropolitan hospitals. Such a system, however, will work only if a stout educational program goes along with it. The intern must not be regarded as a mere convenience. The whole staff must realize that this is for him an important educational opportunity.

Physicians are engaged every day in the teaching profession. They teach their patients how to get along comfortably without calling unnecessarily for a physician. They are constantly teaching the younger members of the profession. They are also constantly teaching themselves. Continuing postgraduate medical education is the touchstone of good medical care.

JAMES RAGLAN MILLER, M.D.

EDITOR'S NOTE: Dr. Miller is a recently elected Trustee of the American Medical Association and is the retiring president of the New England Surgical Society. He has taken a leading part in improving maternal welfare in Connecticut and in hospital management and medical education.

Floral Eponym (43)

Dodonaea

REMBERT DODOENS, 1518-1585

DODOENS, Dutch physician and naturalist, was born at Leyden. He studied *belles-lettres*, languages, mathematics, medicine and botany at the principal universities of Germany, France and Italy. He was the professor of medicine at Leyden and was the physician to Maximillian II and his son Rudolph II. Dodoens was considered a wise physician and a distinguished botanist. His chief book was a huge history of plants with 1303 wood cuts.

Dodonaea is a genus of fifty species of tropical, chiefly Australian, shrubs and trees of the family Sapindaceae. These bushes usually have a sticky foliage, and are not uncommon in sub-tropical gardens in Florida and California. In Australia they are sometimes called hop-bush.

A PLAN FOR IMPROVING HOSPITAL TREATMENT OF PSYCHIATRIC PATIENTS*

PERCY G. HAMLIN, M.D.,
Santa Barbara, California.

The better care of mental patients resolves itself readily into the consideration of three groups of agencies. First, we may consider the complex of functions that can be designated legal-political. This is concerned with laws governing the handling of legal phases of the care of mental disease and the molding of public opinion. It aims to produce pressures upon and to solicit the interest of legislatures, governors, and other elected and appointed officers of government charged with the responsibility of levying and expending public funds, and with writing and administering the laws. The attainment of these aims is best effected by working through the machinery of mental hygiene and other philanthropic and educational groups interested in the care of the mentally ill.

Our second consideration is attracted to a group of functions which may be called socio-economic and which at some points dovetail with and overlap the first. It concerns the training of social workers and psychiatric social workers. It has to do with initiating and maintaining constant and recurring efforts through various instrumentalities, governmental, sociological, political, philanthropic. It touches the protection of vulnerable groups against exploitation, the prevention of child labor, protection against disease, against ignorance, against illiteracy, against mental and moral contamination. All of these things have a direct bearing upon the incidence and the handling of mental disease.

The third great consideration, and the one with which this essay is directly concerned, is the hospital care of the mental patient. This is the most immediate and important undertaking and the other two stand in relationship of subsidiary agencies to it. If a graphic chart of the handling of the problem of mental disease were prepared, the other departments and services would stem from it as the various echelons of an army command stem from the Chief of Staff.

It is the belief of this writer that as Public Health is preeminently a governmental (Federal, state or municipal) function, so, too, is the prevention and care of mental illness. There is a definite place and a real need for the privately owned and non-profit association type of mental hospitals. Many of these have rendered in the past and still continue to supply essential service. In many states they are, and in all they should be, under state inspection and licensure. It is, however, to the public mental hospital, state or Federal, of from 1,000 to 4,000 beds that the ideas and ideals of this essay are intended to apply. The writer believes very earnestly after experience as a military psychiatrist for the past four and one-half years, that the National Government, as well as the several state governments, is or should be vitally interested in the problem of mental health. Its maintenance should be a joint responsibility shared financially and otherwise by the state and Federal governments.

A plan for better hospital care of mental patients involves, in my concept, six definite subdivisions which I have listed in detail. This scheme is presented with the full knowledge that no scheme ought to be too rigid. It merely represents the broad outline, the facade of the structure which is to be committed to the architect's detailed plan only after due and careful deliberation. Schematically, then, I list these subdivisions in the order of their importance, as it appeals to me:

a. The selection of the medical psychiatric staff.
b. The geographical location of the hospital and the construction of buildings.
c. The training of nurses.
d. The selection and training of nursing attendants.
e. The techniques of treatment and the organization of clinical teaching for medical students, student nurses, graduate nurses, nursing attendants and psychiatric social workers.
f. The organization of research in neurophysiology, electroencephalography, neuropathology and sociology.

In respect to the selection of the psychiatric staff

*This paper has been released from the Modern Hospital Essay Contest, and will subsequently be republished in *Modern Hospital.*

which, as indicated, is of the first importance, I take a broad view. If the history of psychiatry teaches us anything at all, it teaches us that the greatest of its exemplars have been conditioned for their work by early association. It is undoubtedly more than coincidence that Pinel was the son of a physician, that J. M. Galt was the son and grandson of a physician, that the famous Quaker family, the Tukes, claimed three generations of mental hospital men and two generations of psychiatrists, that the famous Grosses were father and son, and that the medical Mayos have already produced three generations of surgeons. We would not be on scientific ground, perhaps, to attribute this to heredity, but to attribute much of it to early conditioning is valid enough.

How, then, to find and train men who have the mental and spiritual qualities of Pinel, the Tukes, Haslam, Benjamin Rush, John Conolly, the Galts, Prichard, Esquirol, Pliny Earle, Kirkbride, Isaac Ray, Greisinger, Kraepelin, Bleuler, Rorschach, Kretschmer, Adolf Meyer, William A. White?

We need not leave to chance the finding and training of such men. Psychiatry more than medicine in general is a profession, or ought to be, to which men, to use an old-fashioned ecclesiastical expression, are called. This essay is the exposition of a plan and it is within the scope of our planning to attempt to find the type and produce the conditioning factors and training that give us such men, trained not only in the intellectual equipment of psychiatry, but selected and conditioned for its esprit.

My plan looks to introducing into the schools at the point where the pupil first makes contact with the subject of civics, some instruction in the history of psychiatry and in the biographies of its heroes. The more elementary the school, the more elementary the instruction, increasing pari passu in high school and academic college. My purpose would not be to add additional courses to already overburdened curricula, but to replace some of the scholastic lumber now scattered through the courses and substitute these subjects in their place. If public health and dental hygiene are taught, as they very properly are, in the elementary and secondary schools, then mental hygiene which should embrace the history of psychiatry, should be indoctrinated.

An essential feature of this plan would embrace the founding and financing of scholarships in medical schools and in academic (pre-medical) branches for young men and women, who in the upper forms of secondary schools and colleges, had manifested by their scholastic record an interest in and knowledge of the history of psychiatry and the lives of its exponents. In return for the financing of their studies, these young men and women would assume an obligation to work in public mental hospitals for a definite period. Such scholarships could be financed by philanthropic individuals or societies, by funds of Federal, state, or other political subdivisions, in whole or in part.

The candidates for these scholarships should be selected on the basis of competitive examinations similar to those held for various types of scholarships or for entrance to the several Government academies. The added stipulation, in addition to generally high educational qualifications, should be a searching examination of their knowledge of and sympathy for the cultural (not technical) field of psychiatry.

To controvert a possible objection that such a scheme of obtaining psychiatrists is but wild fancy, I should like to present evidence from a great psychiatrist. Henry Maudsley said, ". . . . The example of the Jesuits who alone among educators seemed to have aimed to adopt especially a system of training to the special qualities of the individual character, proves at any rate how much can be done to mould a human being, to feel, think and believe in a particular way, and to find the happiness of his life in its automatic exercise. In the mental organism we have really a plastic machinery which if taken in hand sufficiently early may be manufactured to almost any desired pattern of feeling and belief. . . . "

It is not meant, of course, to convey the impression that all psychiatrists would be selected and trained as suggested above. On the other hand, it is believed that a considerable nucleus of those who will man our public hospitals could be so obtained. West Point produces only a fraction of the officers who lead our Army and Annapolis a fraction of those that man our Navy, but the two Academies produce the leaven that leaveneth the whole lump.

Many men in the normal course of events will become interested in psychiatry after they enter medical school or even during their interne days. But what we must work to prevent is the practice, so prevalent in the past, of regarding a position on the staff of a state mental hospital, a final refuge

for the professional misfit, for men who have reached for the grapes of medicine and surgery, only to fail to attain them, or to have them turn sour in their grasp. It is not meant to imply that some, perhaps many, men do not find themselves and their work in psychiatry after distress and disillusionment in other fields of medicine. It is my belief that many do so and that they contribute much to the welfare of their patients. But in casting a plan for the better care of mental patients, we cannot leave to chance the selection of the keystone of the personnel arch.

How many psychiatrists could be obtained and trained by such a method as outlined? This, of course, is a matter of some speculation, but it is possible to give an estimate.

In one state with which I am familiar, there is a population of between 2,500,000 and 3,000,000 people. It has a mental hospital population (including two colonies for epileptics and feeble minded) of approximately 10,000 patients. This State is politically subdivided into exactly 100 counties. It has two State-supported Class A medical schools which graduate each year, approximately ninety M.D.'s each, or a total of 180. My plan would contemplate that each county would nominate a qualified candidate whose residence was in the county, every four years, thus giving twenty-five students entering and twenty-five graduating each year from the State as a whole. Each graduate would be required to serve five years in a mental hospital, to be selected by the Commissioner of Hospitals, after the completion of one year or eighteen months' general internship. During this five years' service, he should receive adequate instruction to constitute preparation for certification by the American Board of Neurology and Psychiatry. The obligation to serve the five years would be legally and morally binding in return for the education received. The parallel of West Point and Annapolis is applicable, too, in this respect.

Thus, this State would have a yearly increment of twenty-five well selected and adequately trained doctors to care for its mentally ill. Obviously this would not provide enough psychiatrists to immediately care for this State's needs, as a satisfactory ratio would require a total of 285 doctors of medicine, but the supply thus furnished would gradually accumulate during the five year period and automatically continue.

What is particularly emphasized is that these men and women will have been selected not only for their medical qualifications, which will meet the high standards now in vogue, but also particularly for psychiatry. An additional stipulation might well be that, on their graduation with the degree M.D., they present to the medical faculty an acceptable thesis on some aspect of psychiatry or a closely allied topic.

The selection of the other necessary members of the psychiatric staff should be left to the operation of an examining system based on intellectual, professional, and character qualifications. The latter category should entail much more than perfunctory examination. Properly checked and authenticated biographical data should be required of everyone holding a position of responsibility on the psychiatric staff. Any experienced mental hospital superintendent knows that this is unequivocally demanded. Needless to say, the Medical Superintendent himself should be selected purely on the basis of professional and character qualifications and by means of oral and written examination. Never should the office of Medical Superintendent of a mental hospital be the reward or payment of a political obligation. Almost a hundred years ago, at one of the early meetings of the Association of Medical Superintendents of Hospitals for the Insane (now the American Psychiatric Association), this practice was discussed and condemned.

The ratio of psychiatrists to patients in a particular institution should remain an elastic factor adaptable to the needs of the particular institution, but always maintained above the level of an irreducible minimum. The ratios set forth by the Central Neuropsychiatric Hospital Association, as outlined in the May, 1945, number of *Modern Hospital*, seem particularly appropriate, especially those designated for Class B institutions. Not only is this true of psychiatrists, but it holds for the other categories as well, resident physicians, nurses of various grades, attendants, occupational therapists, recreational therapists and physical therapists. It must be recalled, however, that these are but the outlines of a master plan, which is to be modified in appropriate circumstances. They are not to be considered an end in themselves. Just as bricks and mortar do not constitute a hospital, neither does the appearance of a certain number of the various categories of personnel on the tables of organization guarantee adequate

treatment of the patient. The quality of that personnel is infinitely more important than what is, at the moment, considered the proper ratio of staff to patients.

The next subdivision of my plan deals primarily with the geographical location of the hospital, and secondarily with the type of construction.

With all the death, mutilation, physical suffering and heartache that this hideous War has brought, there has emerged also some balm and healing. One of the blessings that has risen out of the chaos is the aeroplane ambulance. Thousands upon thousands of sick, wounded and mentally sick have been flown across thousands of land and sea miles, over strange seas and foreign shores to be deposited within a matter of hours in general hospitals in the United States. I have repeatedly seen men showing explosive psychotic reactions, who were given a few electro-shock treatments in hospitals in North Africa, and who were deposited in a general hospital in the United States not more than forty-eight hours later.

This means that for all practical purposes by means of the aeroplane ambulance, we have conquered time and annihilated space in the handling of the sick and wounded, and this includes, of course, the mentally sick. During the war, air evacuation has meant the saving of many lives in surgical and acute medical cases. During peace, it should mean the same and, in addition, it should mean that when certain types of hospital care and diagnostic work are needed, the patient can move upon the hospital from any point within a few hours.

The implication is that the geographical isolation of the mental hospital is no longer necessary. This geographical isolation has carried with it intellectual and spiritual isolation and these have been the curse of the mental hospital and the doom of the mental patient.

There is no state in the Union in which a patient cannot be transferred across its greatest diameter from border to border by aeroplane ambulance within a few hours. Where roads are good and the distance not over 150 or 200 miles, travel by automobile, of course, would suffice. Texas, the state of greatest extent of any in the Union, can be crossed from one extremity to the other by an aeroplane flying at conventional speed in from five to six hours. There is hardly a place in the United States where an airport cannot be found within the compass of from two to three counties; and many more airports will be built upon the War's completion.

The geographical isolation of the mental hospitals in the past would not of itself have been the great curse it has unless it had, of necessity, carried with it more serious intellectual and spiritual isolation. Just how great the latter was may be surmised from the caustic words of S. Weir Mitchell in an address to the American Medico-Psychological Association in 1894. ". . . . You were the first of the specialists and you have never come back into line. It is easy to see how this came about. You soon began to live apart and you still do so. Your hospitals are not our hospitals; your ways are not our ways. You live out of the reach of critical shot; you are not preceded or followed in your ward work by clever rivals or watched by able residents fresh with the learning of the schools. . . ."

Many of us who have worked in state mental hospitals have encountered this sort of thing. Remote from the intellectual exchange with energetic colleagues and alert rivals which generates professional acumen, some hospital heads and assistant physicians became little Caesars in their institutions. Some strutted their learning before hayseed juries and circuit riding judges while the poor wretches whose fate hung on their precarious estimate of mental responsibility listened miserably spellbound while these "experts" expounded oracularly on the medico-legal implications of mental disease. Under such circumstances, the scales of justice were indeed held in the hands of a woman blindfold.

It is assuredly true that an exceptional man may thrive and live a life of professional accomplishment in geographical isolation. Such a man was Sir James McKenzie; Crawford Long was another; but the average tends to wilt professionally when cut off from intimate contact with his professional brothers. This is particularly true if he deals in a specialty so essentially chronic as mental illness. Though Pinel came from the great University at Toulouse, it is doubtful, had he not gone to Paris and to the Salpetriere and Bicetre hospitals there, that his name would have come down to us clad in the adoration given to those who selflessly serve their fellow man.

If this crippling intellectual isolation is due, as I believe it to be, largely to geographical isolation, then the remedy becomes obvious. It is to locate most, if not all, of our public mental hospitals close

to medical centers. Specifically, I would locate such hospitals on a perimeter extending twenty to thirty miles from the center of such cities in that state that had medical schools or were medical centers, or both, preferably near the University medical school cities. Patients would move upon the hospital from the rest of the state by aeroplane ambulance, or by automobile, as circumstances determine.

It is not planned, however, to uproot or abandon hospitals recently built and established at more remote points, but there would be no new building in the remote sections. It seems that the useful life of these buildings does not exceed fifty years and is frequently much less. A gradual process of transfer and replacement can be carried on at the center with gradual abandonment of the remote locations.

Outpatient, regional psychiatric clinics, should be placed at strategic points in properly selected communities throughout the state. The functions of these clinics, which would be manned by psychiatrists and social workers, would be to follow up discharged cases from the mental hospitals, to screen patients for the reception hospitals and the center hospital, and to act as psychiatric consultants to the local courts. One or two beds, or a small ward for temporary psychiatric observation, could be maintained in the local general hospital to permit these psychiatrists (manning the outpatient clinics) to have their patients under observation, if necessary, pending diagnosis and transfer to the center hospital.

As there will undoubtedly be opposition to such a plan, some of it based on selfish local political grounds, it is well to examine the reasons for the original location of mental hospitals in remote areas. The chief reason, aside from improper political considerations, was accessibility to public travel facilities—common carriers. For instance, many states have an Eastern State Hospital in the eastern section of the state, a Western State Hospital in the western section and so forth. Patients from certain designated counties in the eastern part of the state are sent to the Eastern State Hospital, those from the western part of the state to the Western State Hospital, and so forth.

With the advent of the aerial ambulance, the problem of accessibility no longer exists.

Formerly, it was considered desirable to have patients "put away" out of sight, but this is no longer our attitude. We are becoming more and more interested in the implications of mental functioning, normal and abnormal.

The only remaining objection likely to be raised, will be based on economic grounds, but the economic loss to a few merchants near the hospital will be so trivial that it can be almost summarily dismissed. Nowadays, the purchasing for these institutions is usually done through a central bureau or purchasing agency, usually located in the state capital. The amount of local purchasing done by the State is usually quite small and the patients themselves usually spend but little.

The present system of diagnostic and reception mental hospitals usually located in opposite ends of the state can be continued either as feeders to or an integral part of the larger hospitals contemplated in my plan. As now constituted, these hospitals usually carry 200 to 250 inpatients which, of course, is a small part of the total case load of mental patients in the state.

It is hardly the part of wisdom, however, as at present contemplated, to group all research and special diagnostic facilities in these reception hospitals. The plan to do this was based on the assumption that precise and satisfactory separation of acute from chronic and recoverable from non-recoverable mental cases can be made. This cannot be done. Every experienced mental hospital physician has had the experience of having some patient whom he had considered hopeless make what appeared to be a miraculous recovery, while, on the other hand, other patients in whom he anticipated a benign course, travelled the road to chronicity and deterioration. For this reason, it is my contention that all patients should be within the orbit of our research facilities and instruments of precision in diagnosis and treatment. Especially should there be available to all patients, on our hypotheticated perimeter 20 to 30 miles from the medical school, whether they be supposedly acute or chronic, curable or incurable, facilities for research and investigation in neurophysiology and into the condition of the autonomic nervous system, in electro-encephalography, in pneumoencephalography, and in neurosurgery and neuropathology.

As the initiation of such investigations and procedures entails high cost in the installation of equipment and the employment of personnel, the economical utilization of these agencies is best accomplished by moving the patients into positions of

accessibility to these facilities which should normally be grouped in and about the medical school.

The implications of this arrangement are immediately obvious. All of the research, consultant, and teaching facilities of the medical school and its laboratories are made available to mental hospital patients. In return, the mental hospital furnishes the greatest, up to now untapped, source of clinical material for the teaching of students in the country, some 700,000 beds in the United States.

Of course, the mere geographical location of the hospital on the perimeter twenty to thirty miles from the medical school, of itself means nothing. There must be actual contact and interplay between the two. Both are the creatures of the State and the state can see to it that the working relationship is established and maintained.

Proper construction of buildings is well understood. Qualified experts in the field of planning these structures are extremely competent and readily available. It is interesting to comment that much thought has been given to this, since the earliest inception of the American Psychiatric Association (then the Association of Medical Superintendents of Hospitals for the Insane) and Dr. Kirkbride, one of the "Original Thirteen", is remembered particularly for his skill in planning. A type of building still extant bears his name. D. Hack Tuke's Dictionary of Psychological Medicine, published in 1892, gives detailed notes on the structure of buildings with the principles involved and sketches illustrating types. Modern modifications of these plans are easily identified.

The grouping of buildings has also been made the matter of considerable study. It is desirable to separate newly admitted patients from those longer hospitalized, to separate those under active treatment from those under less active treatment, to separate the noisy from the sedate, the belligerent from the gentle. These matters are not too difficult. Some cases, of course, can be returned to their own homes or to suitable communities for boarding out as in the Gheel idea. Home care in selected cases has been tried with considerable success in some states, notably Maryland.

An essential function of the mental hospitals in furthering better care of its patients, is the training of nurses. The War has demonstrated the desirability, even the necessity, of a knowledge of the handling of psychiatric disorders in the training of every nurse. My own belief is that for undergraduate students, six months on an affiliated basis is probably a desirable goal. Graduate nurses can be given a year's training with a certificate upon completion. The utilization of the so-called audio-visual aids offers a splendid opportunity. Registers of psychological teaching films are maintained by various agencies, notably Pennsylvania State College, for this purpose. This method of teaching is very effective and conserves the time and energy of the teaching staff. It can be utilized effectively in teaching doctors, nurses and nursing attendants.

It is well to recall that modern nursing probably had its origin in a mental hospital. Florence Nightingale, in 1849, received her original training at Kaiserwerth, Prussia, from Pastor Theodore Fliedner, who conducted there a hospital for female lunatics.

The psychiatric training of the nurse should embrace work with the various categories of psychogenic and psychosomatic illness. It should include the handling of major and minor psychoses (psychoneuroses), the epilepsies, hysteria, and various borderland states. It should also include observation of the techniques of treatment, such as insulin and electroshock therapy, hydrotherapy, and occupational therapy, as well as a knowledge of diagnostic procedures like pneumo-encephalography and electroencephalography.

No experienced mental hospital physician will question the right to a real place on the hospital staff of the nursing attendant. Many a mentally ill person has owed his or her recovery to the kindness, the devotion, the encouragement, the psychotherapy, administered by one of these workers. All too often they have been made to feel that they were tolerated rather than welcomed. Frequently, they have been treated with unpleasant discrimination, social snobbery and even downright rudeness by the families of the physicians, whose patients they were helping to get well. This attitude is difficult to understand —difficult to tolerate. Such workers should be considered welcome and useful members of the team which is trying to help people who desperately need that help.

D. Hack Tuke's Dictionary of Psychological Medicine says, "Dr. Browne at the Crichton Institution, Dumfries (Scotland) in 1854, made the first attempt to educate the attendants upon the insane by a course of thirty lectures to his staff. He strove to

get for his patients the ideal nurse and in this, as in other matters, he anticipated many of the best ideas of the present day but the leadership went over to the general hospitals when Florence Nightingale took into them the good things which she found in the sisterhood system by which Fliedner put into practice the main ideas then adopted by the leading alienists."

Utilization of audio-visual aids and of silent films can be made with great effectiveness and maximum use of available time in the training of this type of hospital personnel and the indoctrination of these workers by these and other appropriate training methods will result in a much higher standard of care for hospital mental patients. Such training must be systematically scheduled and carried out and should lead to a certificate of registration which should be renewable yearly by the hospital, without fee, upon satisfactory evidence of continued good character.

Provision must be made in the properly organized mental hospital for the investigation and utilization of new and authentic techniques of treatment. Such procedures as electro-shock, insulin therapy, pyretotherapy and malarial therapy are to be actively, not perfunctorily, utilized within their proper spheres. The necessary facilities for occupational therapy, physical therapy and recreational therapy must be furnished and systematically pursued. The value of music in calming the emotional storms of the mentally ill was well recognized by the psychiatrists of a century ago. A real interest in this form of healing should be revived in our modern hospitals.

The organization of the teaching of medical students, residents in psychiatry, student and graduate nurses, as well as psychiatric social service workers, must be organized jointly between the medical school and the hospital. This teaching can be accomplished by clinical lectures and demonstration of patients to groups of students, and by the assignment to individual students of patients for work-up. Audio-visual aids, again, can be utilized and observation in laboratories and treatment rooms is essential. Once more it is emphasized that the 700,000 mental hospital patients in the United States represents at present our greatest untapped source of clinical material.

The final subdivision of my plan for improving the hospital care of psychiatric patients has to do with the organization of research in neurophysiology, electro-encephalography, neuropathology and sociology. This serves to emphasize sharply the desirability, even the necessity for close proximity and physical contact between the medical school and its faculty and the mental hospital. The incidence of emotional illness, psychosomatic, psychotic and borderland states, revealed by the War and the draft brings into bold relief the urgent desirability of increasing our knowledge, particularly of the role of the autonomic nervous system. So, too, does the writing of Stanley Cobb, W. B. Cannon, Alvarez, Smithwick and White. Every military psychiatrist and most medical officers have seen numerous and dramatic manifestations of autonomic nervous system dysfunction in soldiers in training and in combat.

Research in bacteriology a generation or two ago conquered many infectious diseases. Many doctors now living have never seen a case of typhoid fever, diphtheria is relatively rare, tetanus has been all but totally eliminated. It is not too much to hope that research in neuro-physiology, neuropathology and electro-encephalography will deprive the psychiatrist of the future of the opportunity for treating much of the mental illness which he now sees professionally. How infinitely more fruitful for good and economical of human life and even of material wealth, ultimately, will such a program be than the raising of buildings of brick and stone for the custodial care of the psychotic and the otherwise mentally crippled. The War is bringing in its wake many cases of emotional and not a few of mental illness. It will be a greater tragedy than it now is if these are to be treated by the multiplication of buildings and the encouragement of pension neurosis rather than by research and real treatment.

The electro-encephalograph is opening up new orientations to the nature of some psychotic states and behavior manifestations, as well as to the epilepsies. Abnormal manifestations of the electrical activity of the brain have already been demonstrated in certain schizophrenics, in chorea, in behavior abnormalities, as well as in the epilepsies; and the frontiers have barely been crossed. The aim of our research and our laboratory work is, then, two fold —to examine change in form and structure through neuropathology, and to study changes in function through neurophysiology and electro-encephalography.

Not the least important function of the mental

hospital is the teaching of medical students whose professional aim is the practice of medicine or surgery and not the specialty of psychiatry. Many, perhaps most, psychiatric and quasi psychiatric problems will be handled by such practitioners first and even entirely. This is as it should be. The specialty of psychiatry needs to be discounted; a knowledge of psychiatry for all doctors needs to be stressed again and again and again. General practitioners are daily called upon to determine the question of certification of a patient to a mental hospital. It is alike necessary for the doctor and his patient that medical students be taught what constitutes a proper certificate of mental illness. What does certification involve and in what cases is it justified? A well staffed and properly organized mental hospital will supply effective means of instruction for students, fitting them for their work when they go into medical practice.

If in these various ways, we strive to remove the physical isolation, the mental inertia, and the spiritual devastation, which has hung like thick fog over the wards of our mental hospitals in the years gone by, we will do well. Then, indeed, may we erase from the lintel of the hospital door-post the legend "All hope, abandon ye who enter here" and substitute in its stead, "Enter ye at this gate and seek the way of truth, the path of honor, and the will to work for men."

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Penicillin-Malaria Treatment Effective For Late Syphilis.

Concurrent administration of penicillin and inoculation malaria is the most effective treatment for patients with dementia paralytica, late syphilis of the central nervous system which leads to insanity and paralysis, according to three Baltimore doctors writing in the August 17 issue of *The Journal of the American Medical Association.*

Frank W. Reynolds, Charles F. Mohr and Joseph Earle Moore began studying the effects of penicillin in various forms of neurosyphilis at the Johns Hopkins Hospital in October 1943 with the cooperation of the United States Public Health Service Venereal Disease Research and Post-Graduate Training Center.

The physicians state that "as of December 1945, 41 patients with dementia paralytica have been treated with penicillin. Twenty-four of these patients (group A) received penicillin alone in amounts ranging from 2,000,000 to 10,000,000 units in divided doses; the remaining 17 patients (group B) received from 2,000,000 to 4,280,000 units of penicillin in divided doses concurrently with induced tertian [most common type] malaria."

Treatment consisted of day and night injections of commercial penicillin into the muscles of the patents. Fifty per cent of those in group A (24 patients) showed improvement in body weight, speech, tremor and handwriting after penicillin treatment. Eleven of this group (46 per cent) also showed improvement in their mental status. On the other hand 75 per cent in group B, treated with penicillin and malaria, showed these general signs of improvement; while at least 10 of the 17 patients (53 per cent) were improved in their mental status.

"Our results with concurrently administered penicillin-malaria treatment are, we believe, so superior to those with penicillin alone in the treatment of dementia paralytica that it is our present conviction that the former is the treatment of choice," the authors say. "Treatment with commercial penicillin alone may be valuable for patients whose age and general physical condition preclude the use of malarial therapy."

Closing Date May 15, 1947.

The $34,000 prize contest for physicians' art work on the subject of "Courage and Devotion Beyond the Call of Duty" will be judged at the Atlantic City Centennial Session of the A.M.A. at Atlantic City June 9-13, 1947.

Art works on other subjects may also be submitted for the regular cups and medals.

For full information, write Dr. F. H. Redewill, Secretary, American Physicians Art Association, Flood Building, San Francisco, Calif., or to the sponsor, Mead Johnson & Company, Evansville 21, Ind., U.S.A.

A CONSIDERATION OF THE UROLOGICAL CARE OF PARAPLEGICS*

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It now seems apparent that a considerable number if not most of the cases of spinal cord injury being treated in the hospitals of the Veterans Administration will eventually be fit for discharge to their homes. In that happy event the continued and rather complex problem of their medical care will fall upon the physicians of their communities. It is desirable, therefore, that these physicians should be to some degree acquainted with the nature of these problems, with the basic pathology and pathological physiology concerned, and with the general principles of treatment which have been instituted at the hospitals in question. The present discussion will concern itself with the approach to the urological aspects of the care of these patients at one of the hospitals which has been set aside as a center for such cases.

The high survival rate of patients with spinal cord injury in the second as compared to that of the first World War has been due largely to the avoidance of urinary sepsis, which arises, essentially, from the disturbances of bladder function associated with various cord injuries. The retention of urine in the bladder eventually leads to infection there, and in the upper urinary tract as well. It favors the development of calculi, and the latter is also facilitated by long periods of inactivity. Incontinence and consequent wetting are not only serious obstacles to general rehabilitation but militate heavily against the healing of bed sores, which are an all too frequent complication in these patients. It is entirely proper, therefore, that the bladder should be a starting point for a discussion of this sort.

The bladder is a reflex organ and micturition is a reflex act. The function of the higher centers is to determine when the environment is appropriate to this reflex taking place. The will can inhibit urination but it cannot initiate it. At best, given certain prerequisite circumstances, it can facilitate such an initiation. A lesion in the spinal cord may interrupt all or some of the fibers through which the higher centers exercise this control. But the reflex centers themselves are located in the second, third, and fourth sacral segments, and unless these are destroyed, or their afferent or efferent roots severed, the reflex function of the bladder will persist. Even when entirely divorced from the central nervous system, the bladder is still capable of a type of autonomous function which is probably mediated largely through ganglia in the vesical wall, aided by the intrinsic characteristics of smooth muscle itself. The chief of these is the phenomenon generally described as the stretch reflex, whereby any given smooth muscle fibre, having been stimulated by stretch, will respond either by increasing its length, thus increasing the capacity of the hollow viscus of whose wall it is a part, or by diminishing its length, and thus producing diminished capacity or emptying.

In the handling of cases with cord injury it is essential to utilize to its fullest capacity whatever type of bladder function remains, superimposing upon the purely reflex activity some type of control to replace that which has been lost as a result of the nervous lesion. The degree of difficulty encountered or of success achieved will of course vary with the nature of the nervous involvement. The recalcitrant or uncooperative patient is perhaps the most discouraging obstacle to success. But in any case, the ideal of treatment may be simply stated, and comprises four main objectives:

(1) Urethral voiding.
(2) A bladder of sufficient capacity to act as a reservoir for convenient intervals.
(3) A bladder which is capable of emptying itself completely.
(4) A sufficient degree of control to avoid involuntary escape of urine.

Any patient who has achieved these, has overcome the chief barriers to his survival and his fullest rehabilitation. It is here contended that the majority of paraplegic patients can in fact achieve these objectives.

In attacking this problem, it is essential to begin with an accurate evaluation of the patient's vesical equipment. Neurological examination, cystometry, cystoscopy, x-ray studies, and careful bedside observations of the urinary function, are all essential,

*From the Urologic and Paraplegic Sections, Veterans Administration Hospital, Richmond, Virginia. Published with permission of the Chief Medical Director, Department of Medicine and Surgery, Veterans Administration.

and the results of all these findings must be carefully correlated and integrated in order to provide an overall picture. Those factors which tend to complicate or to obscure this picture must be sought out, recognized, and eliminated, in so far as it is possible to do so. A rational program for the rehabilitation of vesical function may then be set up and carried out to its logical conclusion. Following such a program as this, and having enlisted the fullest cooperation of the patient, it is gratifying to observe what satisfactory results may be achieved, even in those cases which at first sight seem to offer little hope of improvement.

A prerequisite to the establishment of urethral voiding is the elimination of all urinary fistulae. These are of two types:

(1) Those deliberately established, usually in the early phase of treatment, to provide a satisfactory method of urinary drainage at a time when no other method is practicable or possible. The majority are suprapubic, but perineal urethrostomies are also encountered.

(2) Accidental fistulae arising as the result of infection. These are almost invariably periurethral.

In the very considerable literature on the subject of the neurogenic bladder which has developed in recent years, there have been frequent references to so-called indications for the establishment of permanent suprapubic drainage. It is unfortunately true that in our present state of knowledge a certain small number of patients will be left with this or some other form of permanent catheter drainage. But the unexpectedly good results achieved in a few cases should deter us from condemning any patients in advance to this dreary prospect. Rather, it should be held in reserve as a last resort to be employed when all other attempts to secure adequate emptying of the bladder have failed. It has, therefore, become our established procedure to effect the closure of all fistulae as soon as possible. Experience has shown that a considerable number of suprapubic sinuses will close spontaneously if the bladder is drained through an indwelling urethral catheter, particularly those which open high in the bladder wall. The remainder, and practically all periurethral fistulae, will require surgical repair. In either event a successful result may be either prevented or delayed by one or more of several factors. The chief of these is infection. Suprapubic drainage should not be interrupted in the presence of a badly infected bladder, and preliminary steps to clear up the infection by irrigation and chemotherapy should always be undertaken. During at least the first few days of attempted spontaneous closure there is likely to be more or less leakage, which is highly undesirable in the presence of bed sores. These, then, should be healed before any attempts to close the fistula are made. General debility or toxaemia are also powerful retarding factors.

With normal continuity of the lower urinary tract established the next step is to determine the capacity of the bladder. This is found by measuring the amount of urine passed by the patient during what is for him a normal voiding, and adding to it the amount of residual urine if any be present. Properly conducted and interpreted cystometric determinations provide a valuable check on these figures. If the bladder is to be a useful organ, it must have a reasonable storage capacity so that the urine may be retained for convenient periods of time between voidings. For practicable purposes, it is thought that this should be not less than eight ounces, although a bladder which holds as little as six ounces may be quite comfortable if good control has been established. Except in those cases in which irreversible changes in the bladder wall have taken place, it is entirely practicable to increase the capacity of a contracted bladder to this figure, regardless of the level or the nature of the spinal injury. Infection and calculus are notable irritants to the bladder mucosa, provoking constant contractions of the detrusor muscle; they must therefore be eliminated. Gradual and gentle distention, carried out over a considerable period of time, will then usually result in definite improvement.

Tidal irrigation has been of great value because it provides an easily controlled method of securing this gradual distention, and at the same time helps to keep the bladder clean and free from infection. Properly carried out it is one of the most valuable methods of treatments available. Abrupt and forceful distention of the bladder, on the other hand, tends to defeat its own purpose, for it is well known that the bladder reacts sharply to any sudden increase in its fluid contents by muscular contraction. It is neither safe nor desirable to attempt too much in this direction. Patients are often proud of the amounts they can void, but no useful purpose is served in these cases by a capacity exceeding ten

ounces. Greater distention than this may result in backflow through ureteral orifices, already relaxed, and the necessity for contracting around and expelling too great a volume of fluid may place an undesirable burden upon a detrusor muscle already embarrassed by impaired innervation.

But the bladder should be more than a passive reservoir. It must be able to expel its contents and expel them completely. This demands, on the one hand, a sufficient detrusor force, and on the other an absence of obstruction. It has already been pointed out that an inherent and characteristic property of smooth muscle is its response to stretch. Cystometric observations have demonstrated that with each increment added to the volume of its contents, the bladder reacts first by a contraction, and then by a relaxation which is in the nature of an adjustment to the increased volume. In other words, the intra-vesical pressure after a preliminary rise drops again to a base line after each added increment. As the total volume increases, this base line gradually rises, eventually reaching the point at which the degree of stretch is sufficient to stimulate an emptying contraction. In a normal bladder this is sufficiently powerful and well-coordinated to discharge the contents completely. During the period of so-called spinal shock, which follows practically all forms of spinal injury, the bladder remains atonic. Once this phase has been passed, however, the muscle of the bladder wall regains its tonicity and, in fact, often becomes hypertonic. But observations indicate that in many cases, and particularly in those involving the sacral segments, the coordination of the contractile impulses is faulty. Fortunately, this may often be remedied by regular rhythmic exercise of the detrusor muscle. Here again, tidal irrigation offers a wide field of usefulness, for it provides a means by which the bladder may be permitted to fill to a certain point and then empty completed by syphonage.

A number of observers have pointed out that when the detrusor muscle contracts, there is a reciprocal opening of the internal sphincter. This reciprocity is maintained even when the bladder is completely denervated. It probably depends largely upon the anatomical arrangement of the muscle fibres, but may be mediated in part through the ganglia within the bladder wall. The external sphincter provides one of the methods normally available for inhibiting urination, but, although it can be voluntarily contracted, its relaxation is beyond the control of the will, and can be brought about only by reflex action. In the paraplegic, depending upon the nature and level of the nervous lesion, it either remains responsive to this reflex or is entirely paralyzed. In our experience the external sphincter has not been a significant factor in producing obstruction to the urinary stream, although there are a few cases in which it will contract sharply, and so temporarily cut off urination during a spasm of muscles which derive their innervation from the sacral centers. It is not entirely logical, therefore, to attempt an explanation of neurogenic vesical dysfunction on the basis of disturbed sphincteric action. Detrusor activity is the essential factor in micturition. There is, however, a form of obstruction which must be considered, and in the presence of which even a competent detrusor muscle may be inadequate to empty the bladder completely. In the presence of long-standing infection, which many of these patients exhibit, with consequent irritability and almost incessant contractile efforts, hypertrophy and contraction of the bladder neck are likely to occur. Our own experience, confirmed by reports from other centers, indicates that transurethral resection in such cases is of great value and brings about a disappearance or an appreciable diminution of the residual urine.

Given a bladder which is intact, reasonably free from infection, possessed of an adequate storage capacity, and capable of emptying itself either completely or almost completely, there remains the vital problem of control. The reflex bladder liberated from the control of superior centers will empty, either completely or in part, whenever the intravesical pressure reaches a point sufficiently high to stimulate an emptying contraction. Our aim is to enable the patient to anticipate this, and to empty his bladder voluntarily and at a convenient moment—before, however inappropriate the occasion, it empties itself. Adequate control, therefore, depends upon the patient's ability first to recognize distention of his bladder, and, second, to initiate urination.

A considerable number of our patients have been observed to retain some degree of vesical sensation in association with vesical filling. This may be expressed as a relatively normal sense of a desire to void, a sense of pressure in the lower abdomen, suprapubic or more generalized abdominal pain, or

pain and burning referred to the penile urethra. Occasionally the patient reports that when the bladder is distended he experiences more generalized reactions, presumably due to sympathetic stimulation, such as sweating, chills, or severe headache. These are likely to occur at such an extreme degree of distention, and to anticipate the bladder's involuntary emptying by so short an interval, that they are of little value as signals. Cystometric observations, however, have shown that most of those patients who exhibit the more localized sensory responses do so at levels of filling which are well within their vesical capacity. Thus a means is available whereby the patient can train himself to an awareness of the degree to which his bladder is distended. The smaller group of patients, in whom sensation is unreliable or entirely absent, must depend upon a more difficult but by no means impracticable means of determining when the bladder is to be emptied. This consists of regulating the fluid intake and timing the voidings accordingly. It is no more than an extension of the old method of treating enuresis by withholding fluids for an interval before bedtime. The cooperative patient is able, after some experience, to adjust the frequency of his voiding to the amount of fluid he takes. The method is, of course, not infallible, but in most cases is quite satisfactory. Many of these patients wear a Cunningham clamp as an added safeguard.

Most normal individuals have at one time or another encountered the difficulty of attempting to start urination when the bladder was not sufficiently full. It remains a matter of some doubt, among those who have investigated this problem, whether or not the vesical muscle is susceptible to direct stimulation by an effort of will. But it is again a matter of common knowledge that, if the bladder be moderately distended, even though not sufficiently to have produced a conscious desire to void, micturition can easily be brought about by the simple expedient of straining. The strain results in an increased intra-abdominal pressure; this is exerted against the fundus of the bladder, and produces a sufficient rise in intra-vesical pressure to initiate the stretch reflex. A similar mechanism, varying in degree from the rudimentary to the almost normal, is seen in the bladder after a spinal cord injury. In consequence of this, a number of these patients are able to initiate micturition by abdominal straining. The force of the stream and the successful completion of the act depend upon both the vesical contraction which is thus brought about, and the actual force exerted against the bladder by the increased intra-abdominal pressure. The latter factor was strikingly demonstrated in the case of a patient with a relaxed abdominal wall whose residual urine was over 200 cc. After being provided with a suitable abdominal belt, he was able to initiate voiding by straining, and had no residual urine. In other words, although the normal bladder can contract with sufficient force to empty its contents completely, the bladder with disturbed innervation may require the assistance provided by straining. It must not be forgotten, however, that abdominal pressure alone will not force the internal sphincter. A contraction of the detrusor muscle is necessary in order to bring about the reciprocal opening of the sphincter to which reference has already been made, and this has been adequately demonstrated by cystometric observations.

Straining is not the only method by which urination can be initiated in these cases. No one can work long among paraplegics without hearing about trigger mechanisms, and, although their importance has probably been exaggerated, there is no doubt that some such mechanism does exist in a few cases. Essentially it consists of applying a sensory stimulus which will be carried to the centers which control micturition, and there set off contractile impulses to the bladder muscle. It follows that such a stimulus must arise from an area the sensory supply of which is derived from the second, third, or fourth sacral segments of the spinal cord. A bladder contraction following upon stimulation in the region of the urethral meatus is undoubtedly a true example of the trigger reflex. Others, such as stroking the inner aspect of the thigh or the sole of the foot, may be so interpreted in certain cases. Tapping the abdominal wall in the suprapubic region, however, is not a true trigger, since it probably acts by causing a contraction of the abdominal muscles with a consequent rise of intra-abdominal pressure and the train of events described above. Patients are of course keenly alert to the discovery of such a trigger mechanism, and sometimes turn up with remarkable and bizarre examples. One, for instance, insisted that he could initiate voiding each morning by brushing his teeth. Whatever the actual course of events might have been, this dental reflex soon disappeared and the patient started micturition by

more orthodox methods. In our experience the trigger mechanism, even at its best, has not been as reliable a means of starting the urinary stream as abdominal straining.

There has been some discussion, as well, of the effect of what is known as the mass reflex, whereby contractile impulses are sent out to the bladder during a general discharge of nervous energy such as may occur during the spasms of the skeletal muscles to which some of these patients are unfortunately subject. Although a detrusor response may in rare instances be brought about in this fashion, it is probable that in most cases it results from the consequent increase in intra-abdominal pressure, and this explanation has the support of cystometric findings. A few patients assist the emptying of the bladder by manual pressure through the abdominal wall. But here again an associated detrusor contraction is necessary in order to bring about the opening of the internal sphincter, and the method is of most value when employed during the terminal phase of micturition.

It is, of course, not to be anticipated that equally satisfactory results can be achieved in all cases. The most favorable are those in which the reflex arc is intact, regardless of the level of the lesion. Comparable results may not be expected when the bladder has been deprived entirely of its communication with the central nervous system, and must depend upon the intrinsic innervation of the vesical ganglia. The detrusor action of such bladders is likely to be lacking in force and poorly coordinated, and in consequence of repeated ineffectual contractions the bladder wall tends to become thickened, and the capacity of the organ diminished. Such cases exhibit frequent voiding in involuntary spurts and a high residual urine—in effect, a type of overflow incontinence from a contracted bladder. Tidal irrigation may be successful not only in increasing the capacity, but in improving the force and efficacy of the contractions. In one such case, previously slated for permanent suprapubic drainage, the sinus was closed, and, after a period of tidal drainage, the patient was able to void six ounces at a time, maintained good control, and carried no residual. Only a few, however, will be so fortunate, and the remainder may have to content themselves with the use of a Cunningham clamp to avoid involuntary escape of urine.

There are a number of patients with otherwise satisfactory bladders who still exhibit a stress incontinence with small quantities of urine escaping during coughing, sneezing or sudden movements or changes of position. This results, of course, from the sharp increase in intra-abdominal pressure which may be associated with these activities. The only method of control which has been utilized to date in these cases is the wearing of a clamp. Attempts are being made, however, to train the patient to achieve control over this type of leakage by splinting the muscles of the abdominal wall when possible. The success of this effort remains to be determined.

The chief aim of treatment, and the essential one on which the success of all others ultimately depends, is the elimination of residual urine or its reduction to a negligible quantity. Only then can infection be consistently avoided. Having experienced repeated bouts of urinary tract infection over a period of months or even years, it is not surprising that practically all of these patients are found to have bacteruria. Fortunately, this is by no means synonymous with urinary infection and may do little harm as long as stasis can be avoided.

The complications to be anticipated after the patient's discharge are the same as those to which he was subject during his period of hospital treatment. Urinary tract infection is the most important and damaging of these, not only on its own account but because it is the precursor of most of the others. Furthermore, infection, either local or general, has a notably deleterious effect upon vesical function, and bladders which have achieved a highly satisfactory status will exhibit a striking regression under its influence. Both the therapy and the prophylaxis of intermittent infections depend in the first instance upon adequate drainage. Chemotherapy is an adjunct of tremendous value although unfortunately some of the organisms most frequently encountered are sensitive neither to penicillin nor to the sulphonamide drugs. Streptomycin has been made available in limited quantities for the treatment of these patients, but our experience with it does not as yet warrant the drawing of any conclusions as to its value. When signs of renal infection are present, consideration must always be given to the possibility of a stone blocking drainage from the pelvis of the kidney. It is an unfortunate fact that a certain number of patients will have already developed chronic pyelonephritis, some of them with a hydronephrosis which has reached an irreversible

stage. These are inevitably prone to acute exacerbation, and an occasional course of chemotherapy, even in the absence of symptoms, may prove of prophylactic value.

Epididymitis is most often associated with urethral catheterization, but may and often does occur without it, the urethra having become chronically infected as a result of manipulation in the past. Frequently there are urethral diverticuli, often unsuspected until revealed by a urethrogram or during urethroscopy, and these are prone to harbor latent infection for long periods of time. The treatment of epididymitis is by rest, scrotal support, the application of ice, and chemotherapy, preferably with penicillin; the response to such treatment is usually satisfactory. Some clinics have used warm applications instead of cold with considerable success. The same predisposing factors may result in periurethral abcesses and the development of fistulae. The latter show little or no tendency toward spontaneous closure and almost invariably require surgical repair.

Stone formation occurs in the presence of stasis, aided and abetted by infection, particularly in the presence of the urea-splitting organisms. Another significant factor is the hypercalcinuria which develops during periods of prolonged inactivity, and which is best avoided by regular muscular exercise. Patients vary tremendously in their tendency to form stones, and some do so with appalling speed in spite of all attempts at control. Vesical calculi are of relatively little importance, and are easily removed transurethrally in most instances. Kidney stones, on the other hand, represent a serious menace to life, and, unless so small as to promise passage through the ureter, usually require surgical intervention. During recent years there has been much discussion of the use of certain buffered solutions, such as Albright's or Suby's, as a means of preventing stone formation, or of dissolving or diminishing the size of those already present. Such solutions may be used as bladder irrigants or for pelvic lavage in those cases which are known to have a predilection for the development of calculi. They probably have some prophylactic value but their therapeutic usefulness, when stones are already in existence, has yet to be adequately demonstrated.

A few points regarding general treatment are worthy of mention. An adequate fluid intake must be maintained without interruption. These patients require at least 3000 cc. of fluid daily, and 4000 is probably a safer figure at which to aim. Most patients are well aware of this at the time of their discharge from the hospital. They must be kept well nourished and it is probably wise to supplement the diet with additional vitamins; a high protein ration is particularly indicated. Muscular exercise is extremely important. Not only is it of value in the process of general physical rehabilitation and its consequent effect upon the patient's morale, but it is a means of avoiding hypercalcinuria, the significance of which has already been mentioned. Frequent urinalyses should, of course, be done, and x-ray checks at regular intervals, preferably not exceeding three months, are absolutely essential, since calculus formation may be as insidious as it is rapid. The micturitional function should be kept under constant close observation and checks of the residual urine carried out at least once a month in most cases.

A final word is in order regarding sexual function since it is a matter of great interest to the patients themselves. In most cases the cord injury will have severed the communication between the upper centers and the centers of reflex activity. In consequence, psychic stimulation is no longer capable of producing an erection, but, since the sexual act is essentially reflex in nature, it may be preserved as long as the reflex centers are intact and their communicating fibres uninterrupted, the stimulus in such cases being local, and perhaps unrecognizable by the patient. Erections are observed which appear to have been produced by the irritation of the bed clothes, as well as during incidental manipulation of the genital organs, and patients will from time to time report a nocturnal emission unaccompanied by voluptuous sensation. In such cases paternity should be possible, provided that the vasa have not been occluded by infection. Although the reflex centers for the sexual function are probably located in the upper sacral segments not far distant from those controlling micturition, it would appear that the motor impulses concerned with ejaculation are transmitted through the sympathetic pathways, rather than through the parasympathetic fibres which control the muscular activity of the bladder. The effects of any injury upon the two functions, therefore, are not necessarily proportional or parallel. In-

quiries about artificial insemination are occasionally encountered, but since we have observed no case in which emission occurs without erection it is probable that if ejaculation occurs at all, the insemination can be brought about naturally. The entire subject, however, is one which has not yet been adequately studied, and a considerable further accumulation of clinical data will be required before the questions which arise can be adequately answered.

It is not so much the purpose of this paper to claim or to exhibit good results, as to indicate the principles of treatment underlying our efforts to achieve them. The occasional success has been cited only because it served to suggest that these efforts were well founded. Even more encouraging has been the gradual although unspectacular improvement of a large number of patients, so that, out of some 160 so far treated, about 25 have already been discharged to their homes. It is obviously important that those who now bear the responsibility for their care should be familiar with the fundamental principles upon which their previous care was based. It is no less important that the hospital from which they have been discharged be kept informed of their future course. To this end a follow-up system is being instituted, by means of which, and with the cooperation of the physicians concerned, it is hoped that this essential contact may be maintained.

BIBLIOGRAPHY

1. Creevy, C. D.: Neurogenic Vesical Dysfunction—Alterations in the Physiology of Micturition Due to Lesions of the Nervous System. *Arch. Neurol. and Psych.* **34**:777 (1935).
2. Denny-Brown, D., and Robertson, E. G.: On the Physiology of Micturition. *Brain* **56**:149 (1933).
3. *Idem.:* The State of the Bladder and Its Sphincters in Complete Transverse Lesions of the Spinal Cord and Cauda Equina. *Brain* **56**:397 (1933).
4. Denny-Brown, D.: Nervous Disturbance of the Vesical Sphincters. *New Eng. Jour. Med.* **215**:647 (1936).
5. Holmes, G.: Observations on the Paralyzed Bladder. *Brain* **56**:383 (1933).
6. Langworthy, O. R., Kolb, L. C., and Lewis, L. G.: Physiology of Micturition. Williams and Wilkins, Baltimore (1940).
7. Learmouth, J. R.: A Contribution to the Neurophysiology of the Urinary Bladder in Man. *Brain* **54**:147 (1931).
8. Lewis, L. G.: Treatment of Neurogenic Bladder after Acute Spinal Injury. *Surg. Clin. N. Am.,* **23**:1505 (December, 1943).
9. Lewis, L. G.: Vesical Dysfunction from Lesions of the Cauda Equina. *South. Med. Jour.* **34**:823 (1941).
10. Mullenix, R. B.: Cystometry in the Study of Traumatic Neurogenic Bladders. *Jour. Urol.* **55**:470 (1946).
11. Munro, D.: The Treatment of the Urinary Bladder in Cases with Injury of the Spinal Cord. *Amer. Jour. Surg.* **38**:120 (1937).
12. *Idem.:* Tidal Drainage and Cystometry in Treatment of Sepsis Associated with Spinal Cord Injury. *New Eng. Jour. Med.* **229**:6 (1943).
13. Riches, E. W.: Paralysis of the Bladder. *Proc. Roy. Soc. Med.* **27**:77 (1944).
14. Swartz, D.: The Neurogenic Bladder in Spinal Cord Injury. *Can. Med. Assoc. Jour.* **54**:333 (1946).
15. Thompson, G. J.: Cord Bladder—Restoration of Function by Transurethral Operation. *U. S. Naval Med. Bull.* **45**:207 (1945).
16. Voris, H. C., and Landes, H. E.: Cystometric Studies in Cases of Neurologic Disease. *Arch. Neurol. and Psych.* **44**:118 (1940).

CATARACT SURGERY—RECENT DEVELOPMENTS*

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Despite the advances made in the general care of the eyes, cataract in the adults still constitutes one of the major causes of blindness. One-third of the blindness of all the people over sixty years of age is a result of cataracts. The technique in cataract surgery has undergone a gradual evolution in the past fifteen years. Through observation in visiting eye clinics in various parts of this country and abroad, and assisting operators from the various medical centers at our hospital during the past eighteen years in the week of our Spring Graduate Course, we have picked up a little bit here and a little bit there, and, endeavoring to utilize the best features, we have worked out a technique, which, in our hands, gives uniformly good results. We will not discuss the general examination of the patient or the special examination of the eye or the indications for surgery. We prefer the intracapsular method. It is to be assumed that a proper diagnosis has been made and the physical examination, including elimination of foci of infection, has been properly carried out. The patient is admitted to the hospital one day prior to the operation, and after his complete physical examination, the patient is given a mild sedation and an S S enema. We give penicillin, 20,000 units, intramuscularly every three hours twenty-four hours prior to the operation and for two days following the operation. We feel this is an added precaution in the prevention of infection. One hour before the operation an H M C tablet number two is administered hypodermically. Thorough anesthesia is obtained by the instillation of pontocaine one-half per cent in the conjunctival sac and retrobulbar injection of one-half cc. of one per cent solution of novocaine with adrenalin. Akinesia is produced by the Van Lint method. We do not use a speculum, the lids being held open and eye held down by silk sutures. The upper suture is placed under the superior rectus muscle four to six mm. back of its insertion. The lower lid is held down by a suture placed through the skin near the lid margin. The sutures are attached to the drapes by hemostats.

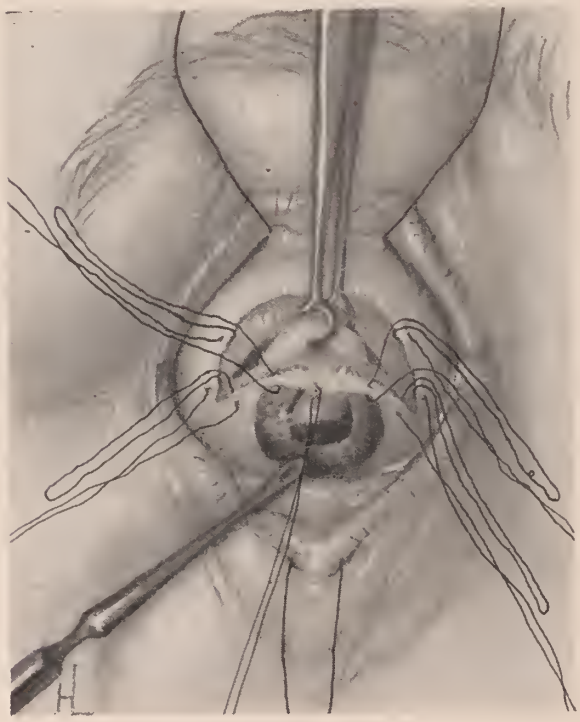


Figure 1, showing the method of applying Voerhoeff's capsule forceps and five conjunctival sutures.

The next step is the formation of a conjunctival flap which is three mm. from the corneal limbus, extending a full one hundred and eighty degrees concentric with the limbus. The dissection is carried out very carefully and deliberately to avoid button-holing and includes not only the conjunctiva but episclera tissues as well. The conjunctiva should be grasped with the toothless forceps.

All bleeding points are carefully controlled either with the use of adrenalin or touching the bleeding points with the end of a strabismus hook which has been heated in the flame of an alcohol lamp.

A flap of this size makes an incision with the knife unhandy and, following the technique described by Cooper, we make a keratome incision. The point of the keratome goes through the sclera just back of the limbus and extends the full width of the cutting edge. We have a specially devised keratome which is fourteen mm. in width at its base.

*Presented by Dr. Gill at the Annual Spring Meeting, Southwestern Virginia Medical Society, May 3, 1946, Wytheville.

The incision is now widened with scissors. By repeated small snips, the incision is enlarged to the horizontal meridian. The scissors guide the incision and the possibility of injuring the iris is thus eliminated. The prepared conjunctival flap is now brought back to its original position and the two lateral sutures, one at ten o'clock and the other at two o'clock, are drawn through and looped out of the way. The central suture goes through the conjunctiva adjacent to the cornea at twelve o'clock, but it does not go through the upper flap. This suture is used for traction by the assistant during the iridectomy and the extraction of the lens. This method of placing sutures was described by Green. In the description of his technique for this operation, he referred to the article by Voerhoeff, which was published in the *Transactions of the American Ophthalmological Society* 25:54-62, 1927. The assistant now makes slight traction on the central suture; this brings the iris clearly into view. The iris is grasped near the pupillary border and a complete iridectomy is performed. This is the best assurance against post-operative prolapse of the iris. Too much stress is made by some surgeons of the desirability of securing a round pupil. This should be reserved for selective cases. With the round pupil, there is a slight improvement in vision and appearance, but it has disadvantages in the danger of prolapse of the iris. The angles of the coloboma are now carefully inspected and placed in good position by an iris repositor. If at any time blood enters the anterior chamber, it should be immediately washed out with warm half normal saline solution.

We come now to the final step of the operation, the extraction of the lens in capsule. Either with a loop or a strabismus hook, continuous to and fro pressure movements are made on the cornea near the limbus. At the same time, the assistant makes traction on the central suture, thus enabling the operator to clearly see the lens the moment it begins to present in the wound. As soon as the equator of the lens is seen, the capsule is grasped with a Voerhoeff capsule forcep and the lens is delivered by continuation of the pressure from below and with slight traction on the lens in order to rupture the few remaining zonula fibres. The moment the lens is delivered, the lateral sutures are tied and again the coloboma of the iris is inspected. The central suture is then placed in the distal flap and tied. Additional sutures can be placed in the conjunctiva if necessary to completely close the wound. Care should be exercised to completely cover the incision as it is a safeguard against infection. If for any reason irrigation of the anterior chamber is necessary, it can be carried out under the flap. At this step, the sutures of the lower lid and the superior rectus muscles are removed and eserine, one-half of one per cent, instilled in the conjunctival sac. If everything goes well, we allow the bandage to remain forty-eight hours before dressing. If pain occurs within twenty-four hours following the operation and is not relieved by mild sedative such as empirin compound, the eye should be dressed immediately, and every twenty-four hours thereafter. If the patient becomes restless and develops symptoms of delirium, we remove the bandage from the unoperated eye and give paraldehyde per rectum. The patient is placed in the bed at an angle of thirty to forty-five degrees. This has greatly relieved post-operative restlessness. One very distressing symptom immediately following the operation is backache. This can be greatly alleviated by pre-operative enema, a well cushioned operating table, and a comfortable bed with adjustable back rest and early and frequent turning the patient in bed. The op-

Figure 2, showing round pupil of wound closed with five sutures.

erative eye should be protected for at least twenty days with a shield to prevent possible injury.

Advantages of the technique described are enumerated as follows:

1. By the use of the silk sutures in the lid and under the superior rectus muscle, we do not have to use an eye speculum, thus allowing the surgeon to close the eye quickly if it is necessary.

2. You can always be assured of the conjunctival flap of the proper width extending the full length of the incision. In the presence of a flap, the wound can be easily and firmly closed, greatly adding to the assurance of the operator. Even in the hands of the most skilled operators, it is impossible to have a conjunctival flap made with a knife extending the full length of the incision. The sutures can be placed before making the keratome incision, certainly before performing the iridectomy. In placing the sutures, we endeavor to include as much of the subconjunctival tissue as possible. We do not go through the cornea or the sclera. We find the sutures stay in place and have to be removed about the eighth day.

3. The incision with a keratome can be made accurately and there is no reason for injuring the iris, lens or cornea. The incision heals just as efficiently and promptly when enlarged with scissors as it does with a knife. The scissors guide the incision and the iris is not disturbed.

4. Using a central suture for traction, the iris is brought clearly into view and an iridectomy can be done carefully and deliberately and the coloboma can be thoroughly inspected.

5. Through use of the traction suture, the lens can be seen the moment it presents in the wound and the Voerhoeff capsule forceps can be placed accurately and deliberately, and is grasped at the equator. According to the measurements by Salzmann, the thickest part of the capsule is nearest the equator of the lens and the thinnest near the lower pole.

6. By eliminating the eye speculum, we do not have pressure on the globe, and this certainly minimizes the possibility of the loss of vitreous. With this complication lessened, the operator is much more at ease. Calmness at all times is conducive to better results.

7. With the entire wound completely closed, we have a safeguard against infection and also against the possibility of prolapse of the iris. We usually allow the patient out of the bed at the end of twenty-four hours, and the period of stay in the hospital is about an average of eight days.

8. The astigmatism with this type of incision in our experience has been one-fourth to one-half less than with the Graefe-knife incision.

9. Finally, we emphasize that this operation is not designed for speed but for safety and accuracy.

BIBLIOGRAPHY

1. Cooper, F. Maxey: *Southern Medical Journal* **34**:698, July, 1941.
2. Green, John: *Southern Medical Journal* **35**:1076, December, 1942.
3. Duke-Elder: Textbook of Ophthalmology **1**, 122. C. V. Mosby Company.
4. Gill, Elbyrne G.: Recent Advances in Intracapsular Cataract Surgery, *Virginia Medical Monthly* **70**: 501-4, October, 1943.

711 South Jefferson Street.

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for August, 1946, as compared with the same month in 1945, and for the period of January through August, 1946, compared with the same period in 1945, follows:

	Aug. 1946	Aug. 1945	Jan.-Aug. 1946	Jan.-Aug. 1945
Typhoid and Paratyphoid	27	25	85	85
Diarrhea and Dysentery	525	2,080	2,125	4,455
Measles	130	23	12,831	1,236
Scarlet Fever	60	74	2,082	2,686
Diphtheria	30	22	291	166
Poliomyelitis	45	87	67	174
Meningitis	9	9	166	187
Undulant Fever	9	3	42	21
Rocky Mountain Spotted Fever	28	25	76	78
Tularemia	7	3	45	32

INFLUENZA VACCINE

A vaccine prepared from the influenza virus, types A and B, has proven to be of value in the prevention of the disease. It was used on a large scale by the Armed Forces during the last winter and preliminary figures have indicated that the infection was markedly reduced. Prior to its use by the military it was given a trial in college students in a carefully controlled study, and this experience indicated the efficacy of the biologic.

The vaccine is administered subcutaneously in a single 1 cc. dose. Reported reactions have been few and minor in nature. Immunity produced is gradually lost, making an annual repetition of the inoculation necessary.

For the past several years influenza in the State of Virginia has not been a very serious illness, with relatively few deaths being reported. The disease, however, is of great significance when morbidity is considered. During the year July, 1945 through June, 1946, 43,338 cases were reported to the State Health Department. If the average duration of the illness is estimated to be five days, computation will reveal that during this year influenza produced approximately 600 man years of illness.

Therefore, this new vaccine is welcome, not because of its life saving possibilities, but because it will afford many years of productive living that heretofore have been lost due to illness.

BRUCELLOSIS

During the past year there has been a noteworthy increase in the number of cases of undulant fever reported in Virginia. Several hypotheses have been advanced as to the cause of the increase, but all are matters of conjecture. There is no simpler explanation than that the disease is being recognized more often. This brings to mind the difficulties arising in the diagnosis of this infection. In many instances only a suspicion of the illness is obtained through the clinical findings and probably in no other infectious disease can the laboratory studies be so confusing.

Diagnosis is definitely established when the causative organism is isolated by culture. In the great majority of cases, however, the cultures are negative, and other laboratory studies for brucellosis must be weighed. On the other hand, the combination of a negative agglutination test, negative skin test and a low phagocytic index have been noted in an actually ill patient with a positive blood culture.

With the exception of a positive culture, the agglutination test is the most valuable laboratory aid. A positive agglutination of 1:80 or higher usually is considered as evidence of active infection. Occasionally, however, cross agglutination occurs in typhoid fever, typhus and Rocky Mountain spotted fever, and tularemia. Often in chronic brucellosis the agglutination falls and becomes negative. Therefore, the agglutination test is only of value when it is positive, and then should be considered with the possibility of a false reading due to other illnesses.

The skin test is often utilized in reaching a diagnosis. Before performing the test, however, all the serological studies deemed necessary should be completed as the antigen used in the skin test will stimulate antibody formation. After its administration, changes in serology may be due to the test. A positive intradermal test is interpreted much as a positive tuberculin test. It means that the patient has

either acute undulant fever, the chronic disease, or has recovered from an infection with brucella. A negative test cannot be used to rule out brucellosis for 5 to 10 per cent of infected people show no reaction from the antigen.

The phagocytic index is an adjunct to the agglutination test and often will indicate the stage of the illness, that is whether the infection is acute or chronic.

With the difficulty of diagnosis and no specific cure for the disease, it is reasonable to suppose that fluctuation in the reporting of undulant fever may be influenced by the diagnostic acumen of the profession.

VERATRUM VIRIDI

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

Veratrum viridi has again swung itself into prominence in the treatment of eclampsia. Its use for this purpose seems to recur in approximately 40 year cycles. About ninety years ago following a period of popularity it was stated by Baker to have had its day. Again, near the turn of the century, the drug was praised for its virtues. It later fell into disrepute with the complaint that the preparations were not standardized. Its most recent advocates were prompted by Bryant in 1935 and Bryant and Fleming in 1940 to use it as an adjunct in the present day conservative treatment of eclampsia. No true estimate can be made of its worth when the outcome is clouded by the use of other drugs.

Opinion is divided as to its value since the drug is both praised and condemned. Potter stated that it was dangerous, deceptive, and uncertain in its action. It is admitted that, as a rule, convulsions may be controlled by the use of veratrum viridi when the pulse rate and blood pressure are reduced sufficiently. Some patients will die and others recover either because of or in spite of the treatment. There is another group that seems to show some response to accepted therapy. There are many points on which clinicians disagree but there is no argument about the fact that the urinary output of an eclamptic patient must be maintained. As a rule vasodilatation follows the use of veratrum viridi. This dilatation accompanies or is followed by a reduction in the pulse rate and blood pressure.

In the July issue of the *American Journal of Obstetrics and Gynecology,* Willson has reported that there is a marked decrease in the urinary output in preeclamptic patients following the use of this drug. This decrease may reach a dangerously low level. The prognosis is considered more favorable when the urinary output approaches, equals, or is greater than the fluid intake in an eclamptic patient. The lowered blood pressure does not contribute toward an increase in kidney function.

It is well to keep in mind that frequent checks of the urinary output are demanded when veratrum viridi is being used. Additional information on its use in a greater number of cases is necessary before this drug will be generally accepted in the management of eclampsia.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. P. M. CHICHESTER, Richmond
President-Elect—MRS. J. E. HAMNER, Petersburg
Recording Secretary—MRS. NATHAN SCHUMAN, Alexandria
Corresponding Secretary—MRS. L. C. BRAWNER, Richmond
Treasurer—MRS. REUBEN F. SIMMS, Richmond

Official Health Program of the Woman's Auxiliary to the American Medical Association.

Fundamentals upon which Auxiliary work for improvement of public hygiene should be based:

(1) Recognition of the fact that public health work is a highly technical job requiring scientific, technically trained workers. That health work undertaken by lay women with no knowledge of the public health problem as a whole is necessarily fragmentary and ineffective.

(2) Recognition of the fact that every state, county and city is entitled to a scientific full-time health department (organized not to treat the sick, but to prevent disease and promote health), adequately financed, free from political domination, and providing continuity of service to a trained personnel so long as work is efficient.

(3) Recognition of the fact that the first and fundamental job for lay organizations like the Auxiliary is to secure such scientific full-time health departments and adequate health protection in their state, county, city or town.

(4) Recognition of the fact that where efficient, full-time, scientific health departments do not exist health activities must be initiated and carried on by volunteer, unofficial agencies; but that all such work should be so planned and administered as to serve as stepping-stones toward the full-time official health department, and that when the full-time official health department, with workers trained for public health work, has become an accomplished fact, lay organizations should support and cooperate with the official workers and should be willing to take orders from them.

(5) Recognition of the fact that no health department, state, county, or city can do effective work without intelligent cooperation of the public; that such cooperation depends upon wide-spread health education; that lay organizations can do this educational work, and are needed for it; and that the Auxiliary can be one of the most valuable tools for an official health department to use in this work.

The National Auxiliary recommends, therefore, that each State Auxiliary undertake, under the direction and with the help of the Public Health Committee of the State Medical Association and of its Advisory Council a study first of all of the fundamental principles of health promotion and of disease prevention. It further recommends study of the National Health Program of the American Medical Association. An excerpt from the program follows:

"Fundamental to the promotion of the public health and alleviation of illness are widespread education in the field of health and the widest possible dissemination of information regarding the prevention of disease and its treatment by authoritative agencies. Health education should be considered a necessary function of all departments of public health, medical associations and school authorities."

BOOK ANNOUNCEMENTS

Books received for review are promptly acknowledged in this column. In most cases reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

The American Hospital. By E. H. L. CORWIN, Ph.D., Executive Secretary, Committee on Public Health Relations the New York Academy of Medicine; Honorary Charter Fellow of the American College of Hospital Administrators; Former Secretary General and Honorary President of the International Hospital Association. New York. The Commonwealth Fund. 1946. 226 pages. Cloth. Price $1.50.

Dentistry. An Agency of Health Service. By MALCOLM WALLACE CARR, D.D.S., Director of Oral Surgery and Visiting Oral Surgery, Metropolitan Hospital; Attending Oral Surgeon, St. Luke's Hospital, Knickerbocker Hospital, Polyclinic Hospital, Flower-Fifth Avenue Hospital; Consultant Oral Surgeon, Roosevelt Hospital, New York; etc. New York. The Commonwealth Fund. 1946. 219 pages. Cloth. Price $1.50.

Medical Education and the Changing Order. By RAYMOND B. ALLEN, M.D., Ph.D., Executive Dean, Colleges of Dentistry, Medicine and Pharmacy, University of Illinois, Chicago. New York. The Commonwealth Fund. 1946. xi-142 pages. Cloth. Price $3.00.

This is the seventh of a series of booklets published by the Commonwealth Fund on the general subject of Medicine and the Changing Order.

One would hardly think such a series necessary as everyone knows more or less, and especially the doctors, how rapidly medicine is changing. For example, all know, and some of us can remember, that not so long ago, even the teaching of medicine, at least in some parts, was a private enterprise conducted for profit. The study of medicine has long been a private investment by students for private profit. It is rapidly ceasing to be such as the state or private benevolence has been obliged to assume more and more of the ever increasing costs of medical education. The student still pays part, and for some ofttimes a considerable part, and he often fails to realize how much is paid by the state or by private benevolence. The doctor out in private practice often thinks little of how he obtained his intellectual capital and uses it freely for his own private profit.

Not only does the state or private benevolence contribute buildings, equipment and much of the operating expenses, but all of the sciences have contributed to the education of the medical student. Contrast, for a moment the oldtime doctor who could and did carry all of his medical armamentarium (everything he knew how to use) in his little black bag, with the modern graduate who needs to use and knows how to use all of the marvelous devices which a hospital contains today. The modern hospital is a good example of the advances which have been made in recent years. Most of its scientific equipment has not been developed by the hospital as such but by the cooperating sciences. It is often built by the state or by private benevolence and is usually conducted at a loss so that it is becoming less and less a private enterprise and is taking on more and more public responsibilities. It is rapidly becoming a necessary factor in the medical care of the public.

Much the same process is beginning in the practice of medicine but more slowly as a doctor's practice becomes for him a vested interest, which, naturally, he defends vigorously. However, as the doctor is being transformed from a friend of the family to an expert scientist, and as the public begins to see more and more clearly how much more could and should be done for the health of the community than to just treat some of the sick for fees, they are beginning to demand that more adequate provision be made.

It is this background which has caused the Commonwealth Fund to prepare and publish this series of little books. The general aim has been to help the doctors to see the changes which are going on in the world as well as in medicine and to cooperate in adjusting to them.

The titles of this series are:

American Medical Practice in the Perspectives of a Century.
Government in Public Health.
A Future for Preventive Medicine.
Medicine in Industry.
Nursing and Nursing Education.
Medical Services by Government.
Medical Education and the Changing Order.
and titles listed for early publication:
Dentistry: An Agency of Health Service.
The American Hospital.
Medical Research.
The Health Insurance Movement in the United States.
Rural Medicine.

E. C. L. MILLER.

REPORTS FOR 1946 ANNUAL SESSION MEDICAL SOCIETY OF VIRGINIA

Council

Since the last meeting of the Society, the Council has held two sessions—the winter meeting on January 17, 1946, and a special meeting on May 29, 1946. These are recorded in the March issue of the MONTHLY, on pages 136-138, and in the July issue, on pages 334-336, respectively.

Executive Secretary Treasurer

TO MEMBERS OF THE HOUSE OF DELEGATES:

Activities of the Society have increased with the return of so many of our members who have been in Service, and the membership has reached its highest peak. There was a membership of 2,056 as of September 15th, or a net gain of 64 over the number reported in 1945. Figures for the year are:

New Members	137	
Reinstatements	3	
		140
Deaths	47	
Resignations	23	
Dropped or lost	6	
		76
		64

Account books of the Society will be audited as of September 30th and a financial statement will appear with the minutes of the annual meeting in the December MONTHLY.

There are still listed forty-eight societies, representing 91 counties and one city. Several of these are inactive but there is little that can be done about them as there are too few doctors in those counties to have meetings. Their names are kept on the list of component societies with the hope that some new doctors may locate in these counties and the societies may be revived.

Most of the committees of the society have been quite active as indicated by reports which appear in this issue. An outstanding action of one of the committees was the appointment of a Director of Public Relations and Medical Service. The Society was fortunate in securing for this position Mr. Henry S. Johnson, a member of the General Assembly, who is well fitted for this position.

This report would be incomplete without a word of appreciation to the members throughout the State who have cooperated with this office upon every call.

AGNES V. EDWARDS.

Delegates to the American Medical Association

TO THE HOUSE OF DELEGATES:

The annual session of the House of Delegates of the American Medical Association was held at San Francisco, July 1-4, 1946. Your society was represented by the undersigned and by Dr. Walter B. Martin, now a member of the Council on Medical Service and Public Relations.

Further action was taken toward clarifying the authority and functions of the various councils, bureaus, officers and employees of the Association, with greater emphasis upon public relations and prepayment for medical care.

Of outstanding importance was the report of the Board of Trustees of the survey of the various activities of the Association which the Board, in consultation with a firm of public relations experts, has been carrying on for the past six months. As a result of this survey, the Board made the following recommendations which were unanimously approved by the House of Delegates: (1) Expansion of the Bureau of Medical Economics, with the employment of a trained and experienced economist as its director. The function of this bureau includes the preparation of material dealing with medical economics for publication in *The Journal* and in *Hygeia*. (2) Establishing a division in the Association's headquarters, the duty of which will be the interpretation of the activities of councils, bureaus and other agencies of the Association to the medical profession and to the public. This division is to be headed by an executive assistant to the General Manager who is to be selected by the Board of Trustees and who is to be an expert, trained in the field of public relations. (3) Expansion of the educational activities of the American Medical Association with the idea of informing the American people during the centennial year of what has been accomplished by American Medicine in the last hundred years under the leadership of the American Medical Association. This activity is to be carried on under the supervision of the editor. (4) Inasmuch as responsibility for public relations has been placed elsewhere, the name of the Council on Medical Service and Public Relations is to be changed to the Council on Medical Service. This body is charged with the duty of enlisting Medical Society support for the development of voluntary prepayment plans and of assisting in promoting these plans with the profession and the public.

A change in the By-Laws proposed at a previous meeting, providing for two sessions of the House of Delegates annually was adopted. It is expected that the extra session will be held in December on a date and at a place to be determined by the Board of Trustees. The Speaker of the House of Delegates was requested to appoint a committee to confer with the Board of Trustees in the continuing survey of public relations which will be reported to the House of Delegates at its next session.

The House reaffirmed its previous action in approving the Hill-Burton bill (S. 191) and in opposing the Wagner-Murray-Dingell bill (S. 1606) and the Pepper bill (S. 1318). The House also signified its disapproval of the Rogers bill (H.R. 6178), providing for the coverage of barbiturates under the Federal Narcotic laws, as it is

believed that regulation of sales of barbiturates should be at state levels only.

No final action was taken with regard to the Health Insurance bill (S. 2143), introduced May 3, 1946, by Senator Taft and others and known as the Taft bill. Its sponsors hope that it will become the basis of an acceptable health bill and they invite the medical profession to study it and submit suggestions for its improvement. Accordingly, the House of Delegates instructed the Council on Medical Service in conjunction with the Bureau of Legal Medicine and Legislation to confer with the sponsors of this bill and report to the Board of Trustees the results of this conference.

The National Bituminous Wage Agreement between J. A. Krug, Coal Mine Administrator, and John L. Lewis, President, United Mine Workers of America, adopted May 29, 1946, involving provisions for medical care, was considered. It was referred to the Council on Medical Service with instructions to contact any concerned group for the purpose of protecting the health and welfare of workers and maintaining proper professional relationship.

In accordance with the By-Laws of the Association which provide for a reapportionment of delegates every third year, this was done on a basis of one delegate for each thousand members or fraction thereof. Virginia, with 1,936 members, continues for the next three years to be represented by two delegates.

Excellent addresses to the House of Delegates were delivered by the President, Dr. Roger I. Lee, the President-Elect, Dr. H. H. Shoulders, Major General Norman T. Kirk, and Vice Admiral Ross T. McIntire. In recognition of long and faithful service to the Association and upon his retirement from active duty, a handsome silver service was presented to Dr. Olin West.

As President-Elect the House of Delegates elected Dr. Olin West, now of Nashville, Tennessee, and as Vice-President, Dr. Edward L. Bortz, of Philadelphia. Dr. Roy W. Fouts, of Omaha, Nebraska, was re-elected Speaker, and Dr. F. F. Borzell, Vice-Speaker. Sir Stuart Duke, Elder of London, was elected to Honorary Fellowship.

The next annual session of the Association will be the centennial session to be held at Atlantic City, June 9-13, 1947. The session of 1948 will be held in St. Louis, and for 1949, New York City was selected, provided that suitable space can be secured.

H. B. MULHOLLAND
J. MORRISON HUTCHESON

Publication and Program

The work of the Program Committee was particularly hard this year for three reasons. In the first place, the House of Delegates determined to have a program that would be particularly attractive to the general practitioner. One session is to be given over to a symposium on the practice of medicine from the standpoint of the general practitioner. This will be under the direction of authorities in the various fields—pediatrics, obstetrics, psychiatry, orthopedics, kidney and heart disease, and laboratory methods. These gentlemen after short introductory discussions will be prepared to answer any and all questions. This will undoubtedly be a valuable part of the program, but it reduces the number of voluntary papers that can be put on the program. In the second place, lack of space at the Cavalier Hotel makes it impossible to have two sections. In the third place, the virtual end of the war brought out a great number of excellent papers. The best that your committee could do under the circumstances was to promise the authors of the "rejected" papers that the committee would accept the papers for publication with the same "priority" rights as if they had been read at the annual meeting.

The committee regrets to report that there has been a sharp increase in the expenses of publication of the MONTHLY. Besides the increased cost of printing, we have had to print more journals as our mailing list has increased from 2,250 to 2,400 each month.

The committee at all times invites suggestions for the improvement of the Journal.

WYNDHAM B. BLANTON
J. EDWIN WOOD, JR.
M. PIERCE RUCKER, *Chairman*

Scientific Exhibits and Clinics

TO THE HOUSE OF DELEGATES:

Due to lack of space, your Committee was able to provide for fewer Scientific exhibits for this meeting than was desirable. These are as follows:

1. "Penicillin in Syphilis"—E. E. Barksdale, M. D., Washington, D. C.
2. "Topical Penicillin"—School of Pharmacy, Medical College of Virginia, and Virginia Pharmaceutical Association, Richmond.
3. "Current Activities"—State Board of Health, Richmond.
4. "Poliomyelitis"—Lee E. Sutton, M. D., and H. H. Henderson, M. D., Department of Pediatrics, Medical College of Virginia, Richmond.
5. "Gastro-Intestinal and Plastic Surgery"—Guy W. Horsley, M. D., Leroy Smith, M. D., D. Coleman Booker, M. D., Surgical Department, St. Elizabeth's Hospital, Richmond.
6. "The Anti-Convulsive Clinic of the University of Virginia" and "Epilepsy in Virginia"—David Wilson, M. D., Hugh Page Newbill, M. D., Department of Neurology and Psychiatry, University of Virginia Hospital, Charlottesville.
7. "Virginia Medical Service Association"—M. Haskins Coleman, Blue Cross and Blue Shield, Richmond.

W. AMBROSE MCGEE,
Chairman

Department of Clinical and Medical Education

The major efforts of this committee during the past year have been directed towards a program for returning veterans. In this, the committee has been represented and aided by Dr. Staige D. Blackford of the University of Virginia Medical Faculty and Dr. James P. Baker of the Medical College of Virginia Staff, both of whom are veterans. It is felt that through their offices definite help and counsel has been given to many veterans. Dr. Blackford made a report with reference to this program in the January issue of the *Virginia Medical Monthly*. This service is continuing but, naturally, the demands for it are materially less.

The committee has had one meeting during the year at which the question of revival of the pre-war postgraduate courses and clinics was discussed at some length. The Virginia Cancer Foundation has earmarked fifteen hundred dollars ($1,500) for a state-wide program in the diagnosis and treatment of cancer, and the committee still feels that the State Society should supplement and aid such a program whenever it is possible to get it under way to the extent of twenty-five hundred dollars ($2,500) per year. It is felt that aid may be obtained from outside the state in connection with such clinics. As soon as adequate help is available, this matter, in the opinion of the committee, should be gone into and, of course, organized. Discussion also was had with reference to a possible course on Nutrition but this is somewhat in the formative stage. Dr. Daniel, a member of the committee, brought up the subject of Psychosomatic Medicine and the need for further education of the general practitioner on this subject. It was agreed that this was a very distinct possibility for future courses and that the matter should receive continued thought on the part of the committee. Unless a definite program in cancer or some other subject can be outlined for the next year, the committee would like to request the Society for twelve hundred dollars ($1,200) appropriation. It is anticipated that the postgraduate clinics held at the Medical College of Virginia and University of Virginia may need some help during the coming year.

Respectfully submitted,

H. B. MULHOLLAND, *Chairman*
JULIAN L. RAWLS
J. P. GRAY
I. C. RIGGIN
H. S. DANIEL
JAMES P. BAKER
GEORGE B. ZEHMER, *Secretary*

FINANCIAL REPORT

DEPARTMENT OF CLINICAL AND MEDICAL EDUCATION

October 1, 1945—September 1, 1946

	RECEIPTS	DISBURSEMENTS
October 1, 1946—Balance on hand	$ 86.55	
November 18, 1946—Med. Society of Va.	500.00	
November 19, 1946—Mrs. M. S. McLean, Sec'y. to Dr. A. D. Hart	———	80.00
	$586.55	$ 80.00
Less disbursement	80.00	
	506.55	
Less Special Fund	86.55*	
Balance on hand September 1, 1946	$420.00	

*This represents a special contribution by Dr. Trout of Roanoke to be used exclusively by postgraduate medical education for Negro doctors.

Legislation

As its name implies, the principal work of this Committee is in connection with the biennial sessions of the General Assembly of Virginia. The Committee supports proposed legislation affecting the medical profession which in its opinion is constructive and in the public interest, and opposes legislation which it considers unwise, unnecessary or actually dangerous. In its activities the Committee is the agency through which the organized medical profession expresses itself and exercises its influence, and it is unfortunate that in many instances the Committee must make important decisions without being able to ascertain the views of those it represents. However, this is an unavoidable condition, and the only safeguard the Society has is to place on the Committee men of sound judgment and wise counsel who will keep informed on current problems touching the profession and the public. Particular attention should always be given to the selection of the Richmond members of the Committee, for they must be available on short notice for hurried conferences and for decisions that cannot be postponed, as well as for personal contact with members of the General Assembly.

In looking back over the past year's work I think I can state that the results of our activities have been reasonably satisfactory. To reach all of our goals would be too much to ask for or expect. We did not solve the perennial problem of the incompetent and sometimes unscrupulous healer who claims to know an easy road to health. We did throw the weight of the medical profession behind certain bills which were enacted into law and which should make a real contribution to the health and welfare of the people of our State.

When the 1944 General Assembly gave chiropractors and naturopaths five-year provisional licenses, with an

opportunity to obtain permanent licenses by making a 50 per cent passing grade on an examination on five basic science subjects given by a Special Board appointed for the purpose, many of us hoped that the recurring efforts of these people to obtain licenses without examination would be deferred for at least five years. However, this was not to be the case, for not one of them applied for or took the special examination offered. Shortly after the 1946 session opened Senators Clarke of Alexandria and Pitts of Fredericksburg introduced Senate Bill 164 which, if passed, would grant full licenses without examination to about 112 chiropractors and naturopaths holding provisional licenses. The bill was referred to the General Laws Committee for consideration and report, and, after reference to a sub-committee and some immaterial changes, was favorably reported for consideration by the Senate.

Your Committee on Legislation and other members of the profession exhausted every means to convince the members of the Senate that to give permanent licenses to men who had refused to take the examinations offered by the Special Board would be to break faith with the 1944 General Assembly, and that until these men become willing to prove their competence to minister to the sick they are entitled to no further consideration at the hands of the members of the General Assembly whose duty it is to guard and protect the health and welfare of our people. When the bill came up for passage Senator Clarke spoke for the bill, and Senators Hagood, Noland, Carpenter, Moffett, Neff and your Chairman, spoke against it. On the roll call vote the bill was defeated 22 to 15. Once more the Senate of Virginia had refused to grant permanent licenses to treat the sick to Chiropractors and Naturopaths who were unable to establish their competency in this particular field.

The defeat of this bill was no easy task, as many of the profession who were called upon for assistance well know. It came only after a hard fight, and against a strong, persistent lobby that was difficult to overcome. The action of the Senate may result in some of these temporary licensees taking the examination before the Special Board, and in some of them making the passing grade and obtaining licenses. On the other hand, they may again refuse to try the examination, and count upon building up enough support in the 1948 Assembly to be granted licenses without any test of ability. Their temporary licenses expire on December 31, 1949, and even if some of them take the special examination and make the passing grade of 50 per cent, there will be others to renew the clamor for admission without examination or for an extension of their provisional certificates. Before the 1948 session of the General Assembly convenes we should take a definite position on these questions, and let our friends know where we stand.

Every member of the General Assembly will be elected in 1947. It should be the duty and privilege of the members of the medical profession to see these candidates and tell them why no man should be licensed to treat the ill and afflicted without some knowledge of sickness and disease. The support of other professional and business men should be enlisted in the cause of skilled medical care, and they should be urged to unite their influence with our own in maintaining the high medical standards we have established in our Commonwealth. Above everything else, the interest and active support of the individual members of the Medical Society of Virginia must be given your Committee at all times if our legislative program is to be successful.

For more than four years a Special Committee of the Society, under the able chairmanship of Dr. Wyndham B. Blanton of Richmond, has been endeavoring to substitute for the present unsatisfactory system under which local coroners investigate suspicious deaths and sometimes make autopsies as well, a statewide medical examiner system headed by a non-political commission and its executive officer who is the Chief Medical Examiner, with a central office and laboratory for expert pathological and toxicological studies. Prior to the 1946 session of the General Assembly a bill embodying the necessary changes in the existing law was prepared by counsel for the Society and was presented to the session with Senators Caudill, Hagood and Battle as patrons. After much hard work on the part of Dr. Blanton and his committee, the patrons of the bill, and your Committee on Legislation, the bill was passed by a substantial majority, and is now a part of our State law. We are justly proud that the State of Virginia now has a splendid statute establishing a Medical Examiner System, and that the credit goes almost entirely to a few public-spirited physicians who have worked untiringly for its adoption.

At the 1944 session of the General Assembly Dr. Blanton and his Special Committee graciously consented to defer the introduction of the bill so that all the efforts of the Committee on Legislation could be centered on the passage of the proposed new Medical Practice Act, and for this reason your Committee is particularly pleased at the generous support given the bill in 1946. The State of Virginia owes Dr. Blanton a large debt of gratitude for his devotion to the ideal of scientific determination of the causes of suspicious deaths, and for his arduous work in translating that ideal into a workable chapter in the statute law of our State.

Under the bill as adopted any existing vacancy in the office of coroner must be filled from a list of two or more local physicians recommended by the component medical society of the county or city in which the vacancy exists. The purpose is to give the Commission making the appointment the benefit of the advice and guidance of the local group of physicians in selecting the coroner. The fee for the investigation and report by the coroner is increased from $5.00 to $10.00 so as to attract competent service. Your Committee strongly urges that the local societies co-operate to the fullest in selecting qualified men for this important position, and that the physicians selected spare no efforts in making the medical investigations and reports required by the Act.

The legislative members of your Committee supported the plan under which the General Assembly appropriated $27,000.00 to be used by the State Health Department during the next two years in establishing and operating a Cancer Control Program for the State of Virginia. If the plan proves successful it will doubtless be enlarged and expanded in 1948.

Once more I desire to express the appreciation of the members of this Committee for the splendid assistance given us by physicians throughout Virginia. Usually, our appeals for aid met with a prompt and intelligent response. Dr. Hagood in the Senate and Dr. Dodd in the House of Delegates worked unceasingly for our legislative program, as did many of our loyal friends in both Houses. To all of them we are grateful. Drs. J. Morrison Hutcheson, Dean B. Cole, Frank S. Johns and W. Lowndes Peple, of Richmond, know legislative work from long experience, and to have them on or actively associated with a Committee on Legislation is almost to insure the success of the program. My personal thanks go to them and to all the members of the Committee—Drs. J. W. Preston, W. A. Porter, Alex. F. Robertson, Jr., G. Colbert Tyler, C. C. Smith.

To have served as Chairman of your Committee on Legislation has been an enriching experience, and I am grateful to the Society for the opportunity given me to have served in that capacity.

Respectfully submitted,

W. C. CAUDILL, *Chairman*

Medical Economics

There have been no communications received nor requests made during the year to the Committee on Medical Economics; therefore the committee has no report to make.

GUY R. FISHER,
Chairman

Membership

TO THE HOUSE OF DELEGATES:

Your Membership Committee reports that all applications for membership which have passed through our hands have come through in regular form and have been favorably acted upon.

The following is a list of those admitted to membership since the last meeting:

Dr. Alfred Abramson, Alexandria.
Dr. Dewey Loring Anderson, Richmond (Now Monroe, Louisiana).
Dr. Rudolph Frank Antoncic, Pulaski.
Dr. Clement Sherrill Armantrout, Harrisonburg.
Dr. Gordon Joseph Axelson, Martinsville.
Dr. Lomas Elmo Ball, Big Stone Gap.
Dr. Homer Bartley, Roanoke.
Dr. Leslie M. Bell, Winchester.
Dr. Ernest Julius Benko, Norton.
Dr. Albert Haskell Bond, Norton.
Dr. Henry Arthur Bonynge, Gordonsville.
Dr. Randal A. Boyer, Richmond.
Dr. Robert Arthur Bruce, Charlottesville.
Dr. Franklin Talmadge Buchanan, Bristol.
Dr. James Otey Burke, Richmond.
Dr. John Daniel Call, Richmond.
Dr. Richard Colbert Cecil, Richmond.
Dr. Walter Randolph Chitwood, Wytheville (Now Martinsburg, West Virginia).
Dr. John Washington Clark, Martinsville.
Dr. Beverley Boyden Clary, Richmond.
Dr. Frank Philip Coleman, Richmond.
Dr. Albert V. Crosby, Norfolk.
Dr. John Moffett Davis, South Boston.
Dr. Joseph Moore Dixon, Marion.
Dr. Adolph Edward Drexel, Alexandria.
Dr. Robert G. Dunn, Jr., Richmond.
Dr. James William Elliott, Lebanon.
Dr. Maynard Robert Emlaw, Richmond.
Dr. David Ivan Farnsworth, Richmond (Now Oteen, North Carolina).
Dr. Ernst Fischer, Richmond.
Dr. Robert Hoyt Flynn, Jr., Radford.
Dr. Jim (Glenn Taylor Jr.) Foust, Norton.
Dr. Lois Frayser, Charlottesville (Now New York, New York).
Dr. George Simeon Fultz, Jr., Richmond.
Dr. Frederick Valentine Gammage, Grundy.
Dr. Charles Todd Garcia, Cape Charles.
Dr. Henry Lorenzo Gardner, Jr., Franklin.
Dr. Chalmers Laughlin Gemmill, Charlottesville.
Dr. Robert Earle Glendy, Roanoke.
Dr. Zoltan Gondos, Arlington.
Dr. Charles Henry Goodykoontz, Jr., Bishop.
Dr. John Guido Graziani, Farmville.
Dr. John Monroe Green, Ferrum.
Dr. William Cecil Grinnan, Richmond.
Dr. Clifford Folsom Gryte, Franklin.
Dr. John Lippincott Guerrant, Charlottesville.
Dr. Philip Gussion, Roanoke.
Dr. William Joseph Hagood, Jr., Clover.
Dr. Frances A. Hellebrandt, Richmond.
Dr. Gabel G. Himmelwright, Newport News.
Dr. Claude Gibson Hooten, Lynchburg.
Dr. Milton Josiah Hoover, Jr., Richmond.
Dr. Joseph William Houck, Lynchburg.
Dr. Herbert Hardy Howze, Norton.
Dr. Charles Randolph Hughes, Bluefield, W. Va.
Dr. William Henry Kaufman, Charlottesville.
Dr. Delbert Vine Kechele, Richmond (Now Bluefield, West Virginia).
Dr. Alvin Jacob Kistler, Wytheville.
Dr. Arthur Klein, Richmond.
Dr. Alfred L. Kruger, Norfolk.
Dr. Melvin Bernard Lamberth, Jr., Richmond.
Dr. Claude Marshall Lee, Jr., Charlottesville.
Dr. Wiley Davidson Lewis, Radford.
Dr. Frank Gold Lindsay, Jr., Portsmouth.
Dr. Cyrus W. Loo, Charlottesville.
Dr. Oscar Hunter McClung, Jr., Lexington.
Dr. Wendell Eugene Malin, Wytheville.
Dr. Julian Edward Mangus, Wytheville.
Dr. Lewis Edward Mangus, Harrisonburg.
Dr. Olin Richard Melchionna, Roanoke.
Dr. George Irving Meyer, Roanoke.
Dr. Robert Murray Miskimon, Richmond.
Dr. Richard O'Brien Monahan, Roanoke (Now Florence, South Carolina).
Dr. John Warren Montague, Richmond.
Dr. William Edward Moody, Scottsville.
Dr. Kermit Jackson Moore, Petersburg.
Dr. Thomas Whitehead Murrell, Jr., Richmond.
Dr. Jerome Natt, Roanoke.

Dr. Harold I. Nemuth, Richmond.
Dr. Emanuel Newman, Vienna.
Dr. William Henry Nicholson, Elkton.
Dr. Paul James Nutter, Fredericksburg.
Dr. John Wendell Oast, III, Norfolk.
Dr. Forrest Elliott Oglesby, Emporia.
Dr. Morris Fred Oxman, Roanoke.
Dr. Carney Cooper Pearce, Jr., Petersburg.
Dr. Peter A. Peffer, Roanoke.
Dr. Chichester Tapscott Peirce, Nuttsville.
Dr. Williams Edwin Pembleton, Richmond.
Dr. James William Phillips, Newport News.
Dr. Randolph Preston Pillow, Roanoke.
Dr. David Pollack, Richmond.
Dr. Reno R. Porter, Richmond.
Dr. R. H. Price, Roanoke.
Dr. Japheth Edward Rawls, Jr., Suffolk.
Dr. William Alexander Read, Newport News.
Dr. James Stuart Richardson, Grundy.
Dr. Harry West Rollings, Jr., Richmond.
Dr. Peter Rosanelli, Richmond.
Dr. Samuel Leonidas Rucker, Jr., Moneta.
Dr. William Roberts Sandusky, Charlottesville.
Dr. John Rudolph Saunders, Richmond.
Dr. Clyde Llewellyn Saylor, Hopewell.
Dr. Walter Eugene Sharpe, Jr., Roanoke.
Dr. Henrik Shelley, Chincoteague Island.
Dr. Aubrey Lawrence Shelton, Norfolk.
Dr. Josiah Thomas Showalter, Philadelphia, Pa.
Dr. James Edward Shull, Lebanon.
Dr. Harold Edward Sisson, Warsaw.
Dr. William Stringfield Sloan, Petersburg.
Dr. William Robinson Strader, Richlands.
Dr. Emmert Christopher Stuart, Jr., Winchester.
Dr. Herbert Selian Talbot, Richmond.
Dr. Daniel Doak Talley, III, Richmond.
Dr. Waller Littlepage Taylor, Virginia Beach.
Dr. William Parker Terry, Blackstone.
Dr. Robert Clell Thompson, Charlottesville.
Dr. William Taliaferro Thompson, Jr., Richmond.
Dr. James Levi Thomson, Norfolk.
Dr. Wiley Burns Trivett, Jr., Big Rock.
Dr. Charles Edward Troland, Richmond.
Dr. Clinton Williams Trott, Wytheville.
Dr. Hugh Henry Trout, Jr., Roanoke.
Dr. Henry St. George Tucker, Jr., Richmond.
Dr. Garnet Roy Tureman, Jr., Richmond.
Dr. Allen Knox Turner, Bristol, Tennessee.
Dr. Gilman Rackley Tyler, Richmond.
Dr. George Dennis Vaughan, Richmond.
Dr. William Edgar Waddell, Lexington.
Dr. Peter Ambrose Wallenborn, Jr., Charlottesville.
Dr. Luther Bradford Waters, Norfolk.
Dr. Waldo Mason Wattles, Lynchburg.
Dr. Carl Wilma White, Colony.
Dr. LeMoyne White, Washington, D. C. (Now Boston, Massachusetts).
Dr. Homer P. Williams, Amonate.
Dr. James Garnett Willis, Fredericksburg.
Dr. Mary Stuart Wilson, Keysville.

We take please in recommending for Honorary Membership in the Society the retiring president, Dr. Julian L. Rawls.

J. F. THAXTON
J. BOLLING JONES
A. M. SHOWALTER, *Chairman*

Ethics

Nothing has come before the Ethics Committee during the past year, hence it has nothing to report.

JAMES L. HAMNER,
Chairman

Judicial

In reviewing the Constitution and By-Laws of the Society, there are a few paragraphs and sentences which are apparently ambiguous or for other reason may be altered. We suggest:

To conform with the By-Laws, a sentence should be added to Article VI of the Constitution to read: *The Editor and State Health Commissioner shall be ex-officio members of the Council.*

Article XIII of the Constitution dealing with Amendments states "This Constitution may be amended at an annual session by a two-thirds vote of the House of Delegates, and ratified by the general meeting." We assume that the words "general meeting" have reference to the meeting of the members of the Society present rather than the House of Delegates, in which case we suggest that the words *"of the Society"* follow "general meeting".

It has been the practice of the Society to publish Committee reports in the October MONTHLY, if the meeting is not held until the middle of the month. Article XIII of the Constitution states that any amendment shall be published in the official publication of the Society *at least a month* before the annual meeting. As this does not conform to the time of publishing reports and would mean that one report (that of the Judicial Committee) would have to be taken out of order and published before the others, we suggest omitting *"at least a month"*.

We also suggest that the order of Articles V and VII in the Constitution be changed so as to have them as Officers, Council and House of Delegates.

In the By-Laws, Article IV, Section 9, should be clarified in the 5th line after "to be acted upon by that body" by substituting for "that body" *"the general meeting of the Society"*.

P. S. SMITH,
Chairman

Public Relations and Medical Service

The Public Relations and Medical Service Committee has met several times during the year.

On January 17th, the following report was submitted to the Council by this Committee:

TO THE COUNCIL OF THE MEDICAL SOCIETY OF VIRGINIA:

The Committee on Public Relations met in Richmond on Thursday, January 3, 1946, and we were privileged to have present also Dr. Julian Rawls, President of the Medical Society of Virginia, to meet with the Committee.

Because of recent developments in certain political circles it is felt that the welfare of our profession in this State and in the Nation is in jeopardy. We believe unless the medical profession sponsors a definite program to offer medical service at a reasonable price to the people generally that in all likelihood one of the pending undesirable bills will in all probability pass the Congress and be enacted into law. It is realized that Virginia's part in this program will necessarily be small, but we feel that if we had an established program working in our State, in all likelihood the passage of undesirable legislation will not affect us too adversely.

It is urged by this Committee that the profession in the State support the bills which will be offered in our Legislature covering medical care for the rural population and the lower income bracket group. These bills were created by a Commission appointed by the Legislature and your Committee on Public Relations served on this Commission. It is felt that the doctors in the State can determine the success or failure of this legislation by their effort or indifference.

The Committee further feels that it is very necessary that a State-wide medical care program, sponsored by the Medical Society of Virginia, should be created and put into operation. We are not sure that the present service plans in the State cover sufficient territory to serve the purposes of our people as a whole.

Finally, the Committee feels that it is very necessary that we employ some one, preferably a lawyer of wide influence, to act in a full time capacity in the interest of the medical profession. We believe that such a Director will serve to educate our profession primarily as to its needs and that by association with similar executives a better rounded program for our profession may be developed and ultimately better relations may be established between our profession and the public as a whole. The Committee feels that this appointment should be made without in any way affecting the present office personnel representing the Medical Society of Virginia.

It is our belief that the appointment of the proposed Director of Public Relations will increase the duties of the present personnel in the Richmond offices. We believe that the compensation offered this executive should be sufficiently attractive as to enable us to secure a vigorous, high type individual.

The Council acted favorably upon the suggestions in the report of the Committee recommending the appointment of an Executive Director and the Council directed the Committee to proceed with the selection of the Executive Director.

During the month of February the Committee met and interviewed a considerable number of men who had indicated an interest in this appointment. After due consideration the Committee recommended the appointment of Mr. Henry Johnson as Executive Director. Mr. Johnson's duties began on March 15th. Since that date Mr. Johnson has been busy familiarizing himself with the details of the medical profession in Virginia and meeting the doctors over the State. Mr. Johnson has also made numerous visits to various other states who have strong and active Public Relations Departments in order that he might better acquaint himself with the work which is being done by other state medical societies.

The Chairman of this Committee attended a meeting of the Council of Medical Service and Public Relations of the Middle Atlantic States on January 31st in Philadelphia. This conference was called at the request of the Council on Medical Service and Public Relations of the American Medical Association as one of the several meetings that would be held during the winter months. This meeting directed its interest towards a plan for an uncomprising attack on legislation of national socialistic or totalitarian concept and also a speedy, effective launching of voluntary medical care plans in every state was urged.

The second meeting of the Middle Atlantic States Regional Conference was held in Philadelphia, May 9, 1946, and our entire Committee attended this meeting, including the President of the Medical Society of Virginia, Dr. Julian Rawls. At this time a review of the work which had been done in the various States represented was offered and permanent organization was created to meet semi-annually to discuss the progress of the Public Relations problem in the various Middle Atlantic States. It was felt by the Committee that this organization offered a very excellent opportunity for constructive work in the future.

J. M. EMMETT, *Chairman*
H. B. MULHOLLAND
I. C. RIGGIN

Rural Health

This committee has had no actual meetings during the year because it is so closely associated with the Committee on Public Relations and, indeed, the Committee on Public Relations has carried out the functions of the Rural Medical Service Committee. It is important, however, to realize that the State Society has such a committee and that the question of rural medical service is one of the outstanding problems before the medical profession today. The solution of this problem may well lead to the betterment of medical service in general and the defeat of so-called "federalized medicine". However, each and every member of the Medical Society must take an active interest in this problem locally and discuss the reasons for the lack of doctors in rural areas, not only with his local society, but with rural medical organizations.

J. M. EMMETT, *Chairman*
H. B. MULHOLLAND
I. C. RIGGIN
J. L. HAMNER
J. A. OWEN

Maternal Health

The activities of this Committee during this year have been necessarily limited. A meeting was held in Lynchburg, November 29, 1945. As usual, this meeting was largely concerned with the various agencies and plans which have been undertaken for improving the care of parturient women in the State which might be expected to reduce the mortality and morbidity. Since this depends largely on the care of so-called underprivileged

group, consideration was given the various means now being employed for this purpose.

Dr. Shamburger reported 139 Maternal and Child Health prenatal clinics in the State with 72,997 visits by patients during the past year; new prenatal cases to clinics, 5,347; postnatal visits, 3,167; physicians assisting in clinics, 327. When the MCH clinics were first established it was found that in spite of all efforts to prevent complications some of these patients became sick and needed hospitalization. The MCH plan described in last year's report was organized to meet this need. Most of these cases were reported to have come from counties in which there were health departments. The great need of health officers in every county is apparent. It is recommended that the Medical Society of Virginia use all possible effort to extend public health services to all counties of the State and the personnel be paid salaries sufficient to promote a high standard of service. During the past year 800 complicated cases were hospitalized under this plan at a cost of $66,580, average $83.28. This plan is to be continued independent of any other hospitalization plans. It was recommended that the MCH clinic service be extended and that existing clinics be strengthened. During the year 1945, 66,362 births were recorded; hospital deliveries were 40,194. Obstetric death rate was 2.2, the lowest so far recorded in this State. This rate in 1931 was 7.7.

The plan of having field representatives of the Virginia League for Planned Parenthood work under the direction of the various county health officers was approved. This work is to be with indicated cases referred by physicians. It was recommended that as soon as conditions would permit the survey of maternal deaths be resumed. Since at this time there are no detailed maternal death records to report, the Committee decided to select a number of subjects, having definite relation to maternal mortality or morbidity and ask each member to select one in which he was most interested and to prepare a short abstract for the Maternal Health page in the VIRGINIA MEDICAL MONTHLY. This has been done with the hope that these would describe accepted methods of treatment and serve at least to stimulate thought on these subjects.

C. J. ANDREWS,
Chairman

Child Welfare

There has been no official meeting of the Child Welfare Committee this year but the chairman and the members of the committee has been cooperating with the members of the American Academy of Pediatrics and the Virginia Pediatric Society in the Study of Child Health Services in Virginia. The survey in Virginia is part of the nation-wide study that the Academy is sponsoring and conducting over the United States.

The study is divided into four major categories as follows:

1—HOSPITAL FACILITIES.

In this phase of the Study, seven different questionnaire forms are being employed. The 112 General, Pediatric, and Maternity Hospitals in Virginia are being surveyed by a trained field staff, working out of the Richmond office. In addition to this, each hospital having 25 or more beds is being surveyed by a pediatrician associated with the hospital, to obtain specific data relating to the pediatric service rendered in these hospitals. All special institutions, such as Nervous and Mental Hospitals, Tuberculosis Sanatoria, and others are being covered by the same physicians. A special questionnaire is used for each different type of hospital or institution.

2—COMMUNITY HEALTH SERVICES.

The greatest part of this phase of the Survey has been carried out through the cooperation of the various Bureaus of the State Health Department and the local Health Officials. For the collection of these data, eight different questionnaires are used. These cover such activities as: Medical Well Child Conferences, School Health Programs, Dental Clinics, Crippled Children's Clinics, Immunization Programs, and many others. Included in this are records of the services rendered in the past year by the many voluntary, benevolent organizations.

3—PROFESSIONAL PERSONNEL (PHYSICIANS AND DENTISTS).

A great deal of correspondence has been involved in the distribution of the three different questionnaire forms used in the Survey of the services rendered by the 2,107 physicians and 935 dentists in Virginia. Each Pediatrician has been asked to complete a six-page form, which includes a schedule of the number of different patients he has treated in a given four-week period. Information is also obtained as to the availability in his community of such essential services as hospitalization, laboratory facilities, x-ray and others. In addition to the pediatricians, all other physicians and all dentists have received a one-page questionnaire on which they are to record the number of patients treated during one day.

Among many other important considerations, this phase of the Survey is to determine the distribution of physicians in relation to the population, with special reference to services rendered to children.

4—PEDIATRIC EDUCATION.

This phase of the Study has not been included as a part of the individual state programs. A Survey of the 66 medical schools throughout the Country is to be made on a national basis, to determine the quantity and quality of pediatric training available in these schools.

The latest progress report from the Virginia Survey is as follows:

Hospitals	*Number in Virginia*	*Percentage Survey Completed*
General	112	94
Special	83	84
Community Health Organizations	91	90
Physicians	2,107	60
Dentists	935	40

It is expected that the final results will be obtained from the Virginia Survey by the end of September. At that time the files will be closed and shipped to the Central Office in Washington. Here the data is to be tabulated and prepared in the form of a composite report.

It was thought that the data which will be collected from this survey will be the best guide the Committee can have to make its plans and push its programs to further the health of the children in Virginia.

EMILY GARDNER,
Chairman

Walter Reed Commission

The Committee was unable to have Belroi, home of Walter Reed, painted during the past year, so did not use the appropriation allowed for that purpose. Insurance was paid, grass cut, and some minor repairs made, the whole expenditure being $21.00.

It is requested that $125.00, or as much thereof as needed, be allowed in this year's budget for the upkeep of the place and that the house may be painted.

CLARENCE PORTER JONES, *Chairman*
J. D. CLEMENTS
JAMES W. SMITH

To Confer with State Board of Nurse Examiners

There has not been a meeting of the committee To Confer with the State Board of Nurse Examiners during the past year and therefore there is no report.

I. A. BIGGER,
Chairman

Syphilis Control

During the past year, the Syphilis Control Committee met twice for the purpose of consultation with the staff of the Division of Venereal Disease Control of the State Department of Health. We wish to express our admiration of the efficiency of this department which is in conjunction with the U. S. Public Health Service. We also express our appreciation of their cooperation with the suggestions of your committee.

Your attention is called to the following subjects:

1. A need of closer cooperation between the physician and the case workers in locating the sources of infection.
2. Present and anticipated uses of penicillin.
3. Laboratory facilities
   (a) Results of premarital blood tests.
   (b) Dark field examinations.
   (c) Spinal fluid examinations.
   (d) Cultures for the gonococcus.
4. Post-graduate education.
5. Treatment of syphilis.
6. Need of legislation placing the responsibility on the physician to get prenatal WaR early in pregnancy.
7. Title of your Committee to be changed to "Committee on Veneral Disease Control."

1. Case finding program for private physicians.

The Committee urgently recommends that all private physicians, after establishing a diagnosis of a venereal disease, obtain the sexual contacts of all cases of primary, secondary, mucocutaneous relapse, and early latent syphilis under one year's duration, and of all cases of gonorrhea. It suggests that if the physician does not wish to interview his own patients, he can request this service from a public health trained nurse or investigator. The health departments of the State will provide the physician with a printed form on which the patient can name his sexual contacts without disclosing the patient's identity. The Committee is aware of the fact that there is an urgent need to check the spread of venereal diseases through case-finding measures. The incidence of these diseases will not be lowered until the reservoir of infectious cases existing in the population is uncovered; thus, the Committee wishes to emphasize the responsibility of the physician to find the source of the infection and to refer such persons to the health departments.

The Committee further recommends that health departments should in all areas provide case investigation facilities and follow-up service for private physicians. In accordance with these recommendations, the State Department of Health has employed twenty-nine male investigators to augment the work of the public health nurses in this field. These investigators have been assigned to the major cities of the State and to the district health departments.

2. Penicillin.

At the May meeting held in Washington, D. C., the Committee recommended that penicillin be removed from the free drug list of the State Health Department for the treatment of syphilis, and that penicillin in oil and beeswax be added to be distributed for the treatment of gonorrhea. The release of penicillin in oil and beeswax was announced on August 17, 1946, by the State Health Department. The committee has carefully considered the possibility of the use of penicillin in oil and beeswax for the ambulant treatment of syphilis and is of the opinion

that as soon as an improved schedule of treatment is released that such a treatment procedure will be recommended to the physicians of the State.

3. Laboratory Facilities.

In addition to its value in prevention of syphilis, this has standardized and improved the Wassermann technique in general uses in the State. The need for expansion of the facilities for the performance of quantitative serologic tests and the standardization of spinal fluid examinations by the laboratory of the State Department of Health is emphasized. Quantitative serology is of greater importance today due to the fact that the procedure is essential in the serologic evaluation of penicillin treated cases.

Recommendation is also made that the physicians of the State be advised that they can obtain darkfield examinations for genital lesions as an aid in the diagnosis of syphilis at most health departments. Facilities for the culture of the gonococcus should be available in all laboratories. It is suggested that the physicians of the State be notified by the State Department of Health of the localities in which these additional laboratory facilities are available.

4. and 5. Post-Graduate Education.

The Committee considered the need for post-graduate refresher courses for physicians of the State and suggested that this program be coordinated with the committee on post-graduate training of the Medical Society of Virginia.

Your Committee members plan a series of articles on the treatment of venereal diseases and facilities available to the general practitioner which will be published in the VIRGINIA MEDICAL MONTHLY. Included in this, will be a detailed report of the first six years' experience with the Premarital Examination Law.

6. It is recommended that the House of Delegates promote the passage of legislation requiring a serologic test of all pregnant women.

Present at the meeting were: Drs. Richard V. Fowlkes, Richmond; E. E. Barksdale, U.S.P.H.; D. C. Smith, University; Raymond Kimbrough, Richmond; David Garner, Roanoke; E. M. Holmes and Mr. Heckman of the State Health Department, Richmond.

W. W. S. BUTLER,
Chairman

Tuberculosis

The Tuberculosis Committee met in Richmond the evening of May 23, 1946. All members were present except Dr. J. B. Nicholls of Catawba Sanatorium, who was unable to attend. By invitation Drs. E. C. Harper and Dean B. Cole, and Mr. Harold McGee, Rehabilitation Director of the Virginia Tuberculosis Association, met with us.

A list of subjects for discussion had previously been prepared and one or more topics assigned to each of the men present. This method gave a more or less general review of the tuberculosis problem in the State at present. It proved to be a very valuable meeting, and we were glad to have the above mentioned guests meet with the Committee, since they added much to the discussion.

The impression gained is that the Tuberculosis Program in the State suffered only slightly from the recent World War, and since the termination of the war, there has been some improvement noted in the various activities. Many tuberculosis organizations which were slowed down are regaining their previous function, and we hope it will not be long until they will be back to their former rate of efficiency.

DEATH RATE:

During the calendar year 1945, there was in the State of Virginia a total of 1,309 deaths from all forms of tuberculosis, both white and colored. (These figures were obtained from the Bureau Vital Statistics as of May 29, 1946.) A breakdown of the figures among the two races revealed 669 deaths in whites and 640 in colored. When we compare this with the 1944 death rate (1,287—626 white and 661 colored) we find an increase of 43 deaths among the whites and a decrease of 21 among the colored, making a net increase of 22 deaths, or 1.67 per cent (all in whites). This is quite unusual, for in most instances in the State there has been a reduction among the whites, and an increase among the colored.

At present no figures are available to show what the death rate from this disease has been in the United States. Some of the authorities, however, continue to feel that there should be, during and following the war, an increase, because conditions suitable for it have been present. In all previous wars there has been an increase in the death rate in the post-war period.

We have heard much about the casualties during the recent war, but very little about the death rate from tuberculosis. It is interesting to note that during the 44 months of war, approximately 206,200 deaths from tuberculosis occurred, while the total battle deaths numbered about 280,000. This is more than two deaths from tuberculosis for every three lives lost in combat by the Armed Forces of the United States.

BEDS AND TREATMENT:

The total number of beds in the State for the treatment of tuberculosis has remained essentially the same.

	WHITE	COLORED	TOTAL
State	770	269	1,039
Municipal	393	192	585
Total	1,163	461	1,624

Some of the beds have not been kept filled mainly for two reasons: (1) Due to limited personnel in the Sanatoria, particularly nurses and nurses aides. It is obvious that to properly care for ill patients, an institution must have an adequate number of nursing personnel. (2) Because the beds were located in buildings where

facilities were unsuitable for caring for ill, or bed patients. The institutions are in need of more infirmary beds; a minimum of two-thirds of the beds should be located on the infirmary.

CASE-FINDING PROGRAM:

Mass x-ray survey work has continued throughout the State during the past year at a steady rate of increase. Those x-rayed included industrial groups, college students, high school pupils, teachers, food handlers, etc. Some of the other State agencies have assisted, but for the most part the work has been done by the State Department of Health. The total number of cases x-rayed is not available at present, but the findings of what were thought to be clinical cases were as follows:

Industrial group—Approximately 1%.
College Students—Approximately ¼%, or 0.25%.
High School Students—⅛%, or 0.12½%.

The equipment used in this work was mostly the 35 mm. photoroentgen units. These will soon be replaced by 70 mm. units. This work is only considered a screening process, since abnormal findings discovered are confirmed with conventional films.

The Medical College of Virginia Hospital has purchased a Photoroentgen Unit (70 mm.) for the purpose of routinely x-raying all patients who come to the Out-Patient Department. This service will be given free, and conventional films taken for confirmation will likewise be given free. Last year we reported arrangements had been made for a similar unit to be used entirely for this purpose at the University of Virginia Hospital. This unit has been installed and is now in use. All patients—private, clinic, ward, or otherwise, coming to the University of Virginia Hospital may be rayed.

The Committee endorses this procedure most highly, because it feels it will be the means of discovering many early cases of tuberculosis that might otherwise escape detection until the disease was far advanced. We hope that other hospitals throughout the State will adopt the policy which is being established by the two State hospitals.

The Committee likewise wishes to recommend that hospitals and institutions throughout the State adopt a routine procedure of examining all new employees, particularly internes, nurses, orderlies, and other people who are in close contact with the patients, and establish a plan whereby they can be x-rayed at regular intervals thereafter.

We further feel that more general hospitals should make provisions for admitting tuberculous patients for the establishment of pneumothorax. This would enable patients who need it to begin treatment while waiting to be admitted to the sanatoria.

REHABILITATION:

This subject reviewed rather fully, and the following conclusions drawn:

In treating tuberculosis, it is no longer considered sufficient to give good medical, surgical and nursing care to the patients. Recreation, education, social and mental adjustment, handicraft and rehabilitation are a part of the treatment, and should be provided for those who need, and are suitable for it. We must realize that it may be necessary for these patients to spend many months, and often years, resting in bed before they are physically suitable to become active again. During these long hours too little attention has been given to the patients in the way of caring for their needs, exclusive of the lungs.

Rehabilitation should be thought of as a process of education through which tuberculous individuals pass to arrive at an adjustment in their health with their family, friends, work, play and to society as a whole. It is not a process which should wait until "cure" is accomplished, but it should start simultaneously with treatment while in bed. Reading material suitable for individuals must be provided; also vocational therapy may begin here—knitting, crocheting, leather tooling, etc. Counseling by a person trained in this work enables an evaluation to be placed on the patient, and determines the advisability and suitability for future training. Some patients before their breakdown were engaged in work suitable for them to return, while others must be prepared for employment more in keeping with their physical strength, and where there is less danger of relapse. Some of this training should begin while the patient is in the Sanatorium, but completed after discharge. To those who do not need a change of vocation, but can return to their former occupation, it may be necessary to give them assistance in social and mental readjustment while taking treatment. This, the Committee feels has been a much neglected field in the treatment of tuberculous patients, but it is encouraging to know that in Virginia rapid progress is now being made along these lines.

The Virginia Tuberculosis Association has, through necessary financing, strengthened the library facilities in the three State Sanatoria, and made provisions for patients taking treatment to get better and more suitable reading material.

The State Department of Education, through the Division of Rehabilitation and Adult Education, has provided teachers for the Sanatoria, and they are counseling and teaching the hospitalized patients. This work was badly needed, and there has been a noticeable change for the better in the general morale of the patients since it was started. The work of rehabilitation is carried on with many patients by the Rehabilitation Division after they return home and have their disease arrested. This Department of Education will be glad to have any of the physicians in the State refer to them cases with physical handicaps—tuberculous or otherwise, whom they consider suitable for rehabilitation.

The Committee realizes that for some time the need for increasing this work of rehabilitation of cases with arrested tuberculosis, as well as other conditions, and it

is earnestly hoped that the physicians throughout the State will give every possible assistance. We can recommend it most highly.

Through the courtesy of Mr. R. N. Anderson, Director of the Division of Rehabilitation, State Board of Education, we have been supplied two informative tables which are included with this report. The numbers shown in each of these tables includes only those cases of tuberculosis which have been investigated and accepted for rehabilitation.

These tables reveal the splendid work that is being done in rehabilitating these people, and show the potential earning capacity of arrested cases who have had proper evaluation and general guidance of their cases by trained personnel.

Table II shows that of the 825 cases rehabilitated in the fiscal year ending June 20, 1946, the average annual earnings were approximately $1,600.00.

Respectfully submitted,

C. L. HARRELL
J. B. NICHOLLS
CHAS. W. SCOTT
FRANK B. STAFFORD, *Chairman*

TABLE I
STATUS OF CASES AT END OF YEAR (JUNE 30)

Rehab. Cases Whose Impairment Is Pulmonary Tuberculosis (Arrested) In Relation to Total Number of Investigated and Accepted Cases	1944			1945			1946		
	T. B. Cases	All Cases	%	T. B. Cases	All Cases	%	T. B. Cases	All Cases	%
In Guidance Process	155	2,071	7.5	156	1,962	7.9	134	2,025	6.6
Engaged in Training and Other Rehabilitation Programs	72	651	11.0	64	652	9.8	62	789	7.8
Programs Interrupted Because of Illness, etc.	10	92	11.0	6	82	7.3	8	79	10.0
Closed—Not in Need of Rehab. Service	73	1,028	7.1	61	898	6.1	50	673	7.4
Moved Out of State	1	26	3.5	2	23	8.7	2	18	11.1
Rehabilitated During the Year	75	1,285	5.8	76	930	8.1	52	825	6.2
TOTALS	386	5,153	7.5	365	4,547	8.0	308	4,409	7.0

TABLE II
NUMBER REHABILITATED WITH AGGREGATE ANNUAL EARNING FOR LAST THREE YEARS

	1944			1945			1946		
	T. B. Cases	All Cases	%	T. B. Cases	All Cases	%	T. B. Cases	All Cases	%
No. Rehabilitated in Year	75	1,285	5.8	76	930	8.1	52	825	6.2
Aggregate Annual Earnings First Year After Rehab.	126,500	2,171,156	5.3	117,396	1,487,856	7.2	81,311		
Average Annual Earnings	1,687	1,694	x	1,547	1,599	x	1,563		

Mental Hygiene

The Mental Hygiene Committee of the Medical Society of Virginia met in Richmond on September 4, 1946. Four members of the committee were present and the chairman presided.

The Psychologist Board which was endorsed by the Society as recommended by your committee in 1945 is now functioning and one examination has already been held. All Psychologists are now examined and licensed similar to the examination of physicians before they are allowed to practice. Your committee feels that this is a forward step.

The committee is of the opinion that the yearly per capita cost of $299 for the care of the mentally ill in the State Hospitals is entirely too small for their proper care. This figures out at the rate of 82 cents a day for maintenance in all of its aspects. The American Psychiatric Association recommends $5 per day for acute, subacute and convalescent cases and $2.50 per day for the chronic cases. The legislature has been quite liberal in capital outlay funds for the next biennium but has not appropriated sufficiently for maintenance. Your committee therefore recommends that the Society go on record as approving the best possible type of treatment for the mentally sick and this requires adequately trained personnel which cannot be obtained under the present salary scale. We also believe that for the best interest of the patient "mentally ill or sick" should be substituted for the word "insane" and that they should be cared for in "hospitals" and not in "asylums".

Your committee recognizes the growing problem of alcoholics and drug addicts. At the present time there are no special facilities for taking care of these cases and the State Hospital Board is well aware of this fact but has been powerless to act due to lack of both money and adequate personnel. We believe that Alcoholics Anonymous has done more for the alcoholic than the medical profession has ever done. It is possible that with the help of Alcoholics Anonymous with better hospital facilities and with out-patient clinics of general hospitals, some constructive help can be given these cases.

The committee is aware of increasing Juvenile Delinquency and recognizes that many of these children are defective, have personality disorders and should be so treated. They should have centers for proper study and not be treated as criminals. An institution for defective delinquents might be advisable.

Your committee commends the Veterans Bureau in its care of the Psychiatric veteran, in its educational program as a prevention of Psychiatric disorders and for paying a salary scale sufficient to attract the best trained personnel. The last mentioned, however, has helped to cause a dearth of trained personnel for the Hospital System in the State, because with the present maintenance budget we cannot compete with Veterans Bureau salaries.

Last year a bill was passed legalizing the construction of a Psychiatric Institute as soon as funds were available. This would be a very valuable addition to the State's Psychiatric facilities in the direction of post-graduate training. The legislature, however, failed to appropriate funds for this purpose.

The State Hospital Board proposes to move the Hospital at Williamsburg to a new site already owned by the State, and the Western State Hospital to a new location. Both of these sites have been purchased, preliminary plans have been drawn and enough money appropriated to finance all of the construction that can be done for the next two years. It is hoped that these two projects can be started by next spring. When completed the State will have two modern and complete mental institutions as good or better than the best in the country. It is also proposed to move the colored feebleminded and epileptic Colony from Petersburg to a new location. Some money has been appropriated but there has been some difficulty in securing a proper location and the site has not yet been selected.

Your committee feels that in many ways considerable mental hygiene progress has been made in the state during the past year.

DAVID C. WILSON
R. FINLEY GAYLE
JOSEPH E. BARRETT
CHARLES F. GRAHAM
FRANK H. REDWOOD, *Chairman*

Medical Examiner System

It has now been four years since your president appointed a committee from the membership of this Society to study the coroner system in Virginia and to devise means for its improvement through legislative enactment. It is a pleasure to report that this commission has now been discharged and that by act of the last General Assembly a bill was passed creating a new and modern system of medical examiners to replace the old order of coroner. The medical profession of Virginia is too well acquainted with this bill to review its contents here. It is proper, however, to quote from a letter of recent date to the chairman of the Board of Postmortem Examiners, Dr. L. J. Roper, from a leading authority in forensic medicine, Dr. Alan R. Moritz, Professor of Legal Medicine at Harvard University. In this letter Dr. Moritz says:

"I am tremendously interested in this recent move that has been made in Virginia to supplant the coroner system by that of the medical examiner. The enabling statute passed by the General Assembly in its 1946 session is so intelligently progressive that the Commission of which you are the Chairman has the opportunity of making the medical examiner's office of the Commonwealth of Virginia a model for the country at large."

". . . The application of medical science to the administration of justice has been almost completely inhibited

in North America because of our Colonial inheritance of the coroner system. We adopted an archaic procedure derived from the Middle Ages and then made it even worse by throwing it into the pot of county politics. The result has been that the administration of criminal justice, civil procedure and public health throughout the United States has been deprived of the inestimable value of competent medical investigation of deaths due to violent or obscure causes."

"Virginia has made provisions for eliminating the incompetent coroner system and has established a mechanism by which a truly efficient medical examiner system can be put in operation."

". . . [It is] my belief that you have it within your hands to render [an] important service to the country at large by the establishment in Virginia of the first truly effective medical examiner system in North America."

Your Committee has had the cooperation and help of many interested members of the Medical Society of Virginia, but recognition is especially due to members of the Legislative Committee, Drs. Dean Cole, Morrison Hutcheson, and Frank Johns, and for their untiring efforts to the patrons of the Bill, Senators W. C. Caudill, J. D. Hagood, and John Battle. Our attorney, Mr. Robert C. Duval, Jr., not only shared largely in the preparation of the Bill, but by his interest, enthusiasm, and intimate knowledge of the situation, contributed largely to the success of our efforts. It is hoped that the Medical Profession of Virginia through its city, county, and regional medical societies will nominate to the Board their ablest members for the position of coroners and that by their enthusiasm and support, the system will become an outstanding example of efficient medico-legal service to the state.

WYNDHAM B. BLANTON, *Chairman*
M. B. BEECROFT
KENNETH D. GRAVES
J. EDWIN WOOD, JR.
ERNEST G. SCOTT
J. H. SCHERER
W. D. KENDIG
G. COLBERT TYLER
GEO C. WILLIAMS
W. O. BAILEY
A. BROWNLEY HODGES
S. H. GARST
P. W. MILES

Industrial Health

There have been no meetings and no expenditure of money by the Committee. However, it is recommended that, in the future, the members of the committee be selected from physicians who are located reasonably close to each other.

It is also recommended that the Chairman of the committee be an individual who is associated with either of the two Medical Schools in the State or is associated with the State Department of Industrial Hygiene, so that he can have time to devote himself to the duties of the committee, and that he attend the yearly National meetings on Industrial Health, sponsored by the American Medical Association.

Respectfully submitted,
W. L. WEAVER,
Chairman

Cancer

During the past year, the Cancer Committee has approved the reopening of the already certificated Lynchburg Tumor Clinic under the joint direction of Dr. J. W. Houck and Dr. J. W. Devine, Jr. This clinic had to be closed during the war.

The Committee has also certificated the Alexandria Tumor Clinic under the direction of Dr. H. D. Wolff and the Danville Tumor Clinic under the direction of Dr. Charles A. Easley, Jr. There is still no tumor clinic for indigent cancer patients southwest of Roanoke and there are no facilities for colored patients in Roanoke. Otherwise, the needs in the State are pretty well met.

The Cancer Committee has directed the Virginia Cancer Foundation to alter its method of certification of financial eligibility. Certification of eligibility used to be obtained from any one of a number of agencies and individuals. Financial eligibility is now determined only by the local Public Welfare Departments. The Cancer Committee feels that they are the best qualified agencies from which to obtain certification with uniformity of procedure.

The Cancer Committee wishes to take this opportunity to express its approval of the establishment of the new Bureau of Cancer Control in the Department of Health of which Dr. G. R. Carpenter is director.

With the cooperation of the VIRGINIA MEDICAL MONTHLY, the Cancer Committee published six bulletins during the past year. Owing to increased cost in publication, the Committee asks for an appropriation of $125.00 to cover the publishing of another six bulletins during the coming year in addition to the same appropriation of $20.00 to cover its expenses for postage and stationery.

Respectfully submitted,

GEORGE COOPER, JR., *Chairman*
EDWIN P. LEHMAN
I. C. RIGGIN
R. L. PAYNE
FRED M. HODGES
R. P. BELL
HUGH H. TROUT
I. A. BIGGER
A. B. GATHRIGHT

Nutrition

There has been no meeting of the Nutrition Committee of the Medical Society of Virginia. As chairman of the committee, I had nothing to bring up before the committee.

Each member of the committee has been canvassed and they had no subjects in mind which they thought should be discussed. For this reason no meeting of the committee has been held.

W. W. WADDELL,
Chairman

Rehabilitation

Following the appointment of your Rehabilitation Committee, its members were asked by the State Board of Education to serve as the Medical Advisory Committee of the Division of Rehabilitation. Your committee met at the John Marshall Hotel in Richmond on January 13 and proceeded to organize. Dr. George A. Duncan was elected secretary. The following members were named to serve with the chairman and the secretary as an executive committee: Dr. George B. Setzler, Dr. Frank B. Stafford, and Dr. Paul D. Camp. It was decided that the same committee organization would hold in performing the function of Medical Advisory Committee of the Division of Rehabilitation.

At the meeting on January 13 members of the staff of the Division of Rehabilitation were present. The Virginia program of Rehabilitation was discussed rather thoroughly with particular reference to its provision for hospitalization, medical and surgical treatment for indigent adults. Disabled adults who can be made employable may be aided in procuring such treatment of certain static conditions if they do not have the financial resources to provide this themselves. A statement explaining these services was ordered submitted to the VIRGINIA MEDICAL MONTHLY for publication. This was published in the May issue. Your committee recommended that the Division of Rehabilitation have reprints of this statement made and mailed to the members of the medical profession in the State. This was done.

In its capacity as Medical Advisory Committee of the Division of Rehabilitation your Committee began work in its January meeting on a schedule of professional fees to be recommended to the State Board of Education for use by its Division of Rehabilitation. Through consultation and correspondence with members of the profession this work proceeded throughout the year. The schedule has been completed and its adoption has been recommended to the State Board of Education.

Throughout the year members of your committee have met and consulted with various members of the staff of the Division of Rehabilitation on various matters pertaining to physical restoration services for indigent adults undergoing rehabilitation. Two members of your committee, Dr. Newbill and Dr. Stafford, attended a full meeting of the staff of the Division in which the discussions were confined to physical restoration services in rehabilitation.

ROY M. HOOVER, *Chairman*
GEORGE A. DUNCAN, *Secretary*
HUGH PAGE NEWBILL
GEORGE B. SETZLER
FRANK B. STAFFORD
LEROY SMITH
PAUL D. CAMP
N. F. RODMAN
I. C. RIGGIN

Advisory to Woman's Auxiliary

This Committee has had some correspondence with officers of the Auxiliary, and in the January issue of the VIRGINIA MEDICAL MONTHLY published a report on the recommendations of the sub-committee of the Virginia Advisory Legislative Council on its Study of Rural Medicine in Virginia.

No other matters have been brought to the attention of your Committee.

PHILIP S. SMITH,
Chairman

Delegates to Virginia Beach Meeting

The following delegates and alternates have been appointed from the component societies to the meeting of the House of Delegates at Virginia Beach. If your Society has not reported, please ask your delegate to report to the Secretary before the meeting of the House of Delegates to be held at The Cavalier on Monday, October 14th, at 11:00 A. M.

Delegate	*Alternate*
Accomack	
Dr. J. L. DeCormis	Dr. J. Fred Edmonds
Albemarle	
Dr. Percy Harris	Dr. E. D. Davis
Dr. Edwin P. Lehman	Dr. R. T. Ergenbright
Dr. W. Roy Mason, Jr.	Dr. T. J. Williams
Alexandria	
Dr. J. W. Love	Dr. H. A. Latane
Alleghany-Bath	
Dr. J. M. Emmett	Dr. R. L. Claterbaugh
Dr. S. P. Hileman	Dr. G. A. Torrence
Augusta	
Dr. Guy R. Fisher	
Dr. Glenn C. Campbell	
Bedford	
Dr. C. R. Titus	Dr. W. V. Rucker
Botetourt	
Dr. G. W. Wright	Dr. E. B. Morgan
Buchanan-Dickenson	
Dr. J. C. Moore	Dr. P. Q. Daniel
Dr. T. C. Sutherland	Dr. R. L. Phipps
Charlotte	
Dr. Thomas Watkins	
Culpeper	
Dr. J. B. Jones	Dr. O. K. Burnette

Delegate	*Alternate*
Danville-Pittsylvania	
Dr. P. W. Miles	Dr. J. J. Neal
Elizabeth City	
Dr. R. H. Wright, Jr.	Dr. W. P. Smith
Fairfax	
Dr. Wm. Meyer	Dr. E. Newman
Fauquier	
Dr. W. R. Pretlow	Dr. Stewart McBryde
Fourth District and Southside	
Dr. G. M. Naff	Dr. J. B. Kiser
Dr. F. J. Wright, Jr.	Dr. Leta White
Dr. J. M. Habel	Dr. J. T. O'Neal
Dr. W. M. Phipps	Dr. C. L. Saylor
Dr. W. D. Kendig	Dr. H. E. Whaley
Fredericksburg	
Dr. C. A. Nunnally	Dr. L. A. Busch
Dr. W. W. Butzner	Dr. T. B. Payne
Dr. Rogers Harris	Dr. G. A. Reynolds
Hailfax	
Dr. W. L. Eastlack	Dr. J. A. Owen
Isle of Wight	
Dr. Rea Parker	Dr. Ivan Steele
James River	
Dr. Garland Dyches	Dr. E. J. Haden
Dr. N. P. Snead	Dr. E. B. Nuckols
Dr. A. C. Whitley	Dr. J. H. Yeatman
Lee	
Dr. J. H. Dellinger	Dr. T. S. Ely
Loudoun	
Dr. J. T. Jackson	Dr. J. A. Gibson
Lynchburg	
Dr. H. H. Hurt	Dr. Eugene Groseclose
Dr. J. T. T. Hundley, Jr.	Dr. E. A. Harper
Mid-Tidewater	
Dr. J. R. Parker	
Dr. R. D. Bates	
Dr. H. F. Hoskins	
Dr. M. H. Harris	
Dr. H. A. Tabb	
Dr. J. W. Chinn	
Dr. R. B. Bowles	
Nansemond	
Dr. J. M. Habel, Jr.	Dr. O. R. Yates
	Dr. E. C. Joyner
Nelson	
Dr. B. F. Randolph	Dr. Estes Kidd
Norfolk	
Dr. W. B. Martin	Dr. K. K. Wallace
Dr. B. E. Harrell	Dr. A. B. Hodges
Dr. N. F. Rodman	Dr. C. J. Andrews
Dr. M. S. Fitchett	Dr. P. St. L. Moncure
Dr. G. A. Duncan	Dr. Foy Vann
Dr. M. B. Savage	Dr. A. A. Burke
Northampton	
Dr. J. W. Jackson	Dr. J. M. Lynch

Delegate	*Alternate*
Northern Neck	
Dr. Paul Pearson	Dr. J. H. Hare
Dr. C. Y. Griffith	Dr. E. T. Ames
Dr. R. E. Booker	Dr. L. E. Cockrell
Dr. L. S. Liggan	Dr. C. T. Pierce
Northern Virginia	
Dr. F. D. Whitworth	Dr. E. L. Grubbs
Dr. C. H. Iden	Dr. Frank Tappan
Dr. G. G. Crawford	Dr. F. C. Downey
Dr. B. B. Dutton	Dr. J. A. Miller
Dr. Elizabeth Cover	Dr. F. T. Amiss
Dr. J. G. Brown	Dr. J. P. Snead
Patrick-Henry	
Dr. B. A. Hopkins	Dr. J. T. Shelburne
Dr. T. H. Dickerson	Dr. G. J. Axelson
Princess Anne	
Dr. Ira Hancock	Dr. R. A. Stata
Richmond	
Dr. I. A. Bigger	Dr. H. B. Haag
Dr. M. P. Rucker	Dr. P. N. Pastore
Dr. Frank Johns	Dr. Frank Pole
Dr. W. R. Bracey	
Dr. H. J. Warthen, Jr.	Dr. J. P. Baker
Dr. W. D. Suggs	Dr. T. B. Washington
Dr. Guy Horsley	Dr. H. W. Blanton
Dr. W. R. Hill	Dr. Reuben Simms
Dr. W. P. Barnes	Dr. O. L. Hite
Roanoke	
Dr. Frank Farmer	Dr. George Hurt
Dr. C. H. Peterson	Dr. M. H. Williams
Dr. T. J. Hughes	Dr. E. G. Gill
Dr. W. R. Whitman	Dr. J. D. Willis
Rockbridge	
Dr. K. N. Byrne	
Rockingham	
Dr. E. B. Miller	Dr. B. S. Yancey
Southampton	
Dr. J. A. Grizzard	Dr. R. L. Raiford
Southwestern	
Dr. W. A. Porter	Dr. J. G. Cox
Dr. S. A. Tuck	Dr. M. C. Newton
Dr. V. J. Cox	Dr. W. P. Davis
Dr. A. M. Showalter	Dr. J. J. Giesen
Dr. D. S. Divers	Dr. F. W. Delp
Dr. George Wright	Dr. R. D. Campbell
Dr. J. A. Wolfe	Dr. H. M. Hayter
Dr. C. D. Moore	Dr. S. W. Huddle
Tazewell	
Dr. Mary E. Johnson	Dr. J. M. Peery
Warwick	
Dr. A. A. Creecy	Dr. Waverly Payne
Dr. E. L. Alexander	Dr. Horace Longaker
Williamsburg-James City	
Dr. J. E. Barrett	Dr. E. B. Maxwell
Wise	
Dr. S. H. Rivers	Dr. W. B. Barton

EDITORIAL

Indoctrination at the County Medical Society Level

THE Los Angeles County Medical Association is noteworthy for a number of reasons. In the first place, it is an old medical society as medical societies in this country go. In January of this year it ended its seventy-fifth year with a Diamond Jubilee Banquet. In the second place, it is a large medical society—only nine state medical associations have a larger membership than has this county medical society. In the third place, it believes that fellowship in its Association is worth while.

As the American Medical Association is set up, the county societies hold the key to organized medicine. To be a member of the American Medical Association, one must belong to his state or territorial association; and to be a member of the state society, one must in turn be a member in good standing of his local medical society. The county medical units possess the sole, absolute and independent authority over their membership, and under what conditions an applicant physician may be granted membership relations.

The Los Angeles County Medical Association is determined that those who become members of their Association, and incidently, of the American Medical Association, "shall have not only proper scientific and ethical qualifications but also an adequate understanding and outlook on medical organization, economics and public relations." To attain this desirable end, each new applicant for membership will henceforth be required to attend a course of lectures by qualified instructors, designed to augment his knowledge of California laws affecting the practice of medicine, of malpractice prophylaxis, of professional ethics and courtesy, of the Association's history, accomplishments and aims, and other essential subjects. Not only must the candidate attend the lectures, but he must pass an examination upon them. The number of lectures to be given and the scope of the examination are being worked out by a committee.

Such courses in public relations have been suggested for undergraduate medical students, but already the curriculum is overcrowded. Perhaps the Los Angeles Medical Association has found the right place for this type of instruction.

"That Mothers Might Live"

ONE of the nicest affairs at the San Francisco meeting of the A.M.A. was the unveiling of Dean Cornwall's painting of Oliver Wendell Holmes delivering his matchless address on the contagiousness of puerperal fever. This is the sixth of Wyeth's series of "Pioneers of American Medicine". At the dinner in the Gold Room of the Palace Hotel, F. F. Law, vice-president of Wyeth Incorporated, told of the artist's painstaking efforts to have all the details of this and the preceding paintings of the series historically correct. For instance, in the Beaumont picture a gutta-percha drainage tube was depicted. Over 600 letters came in saying that gutta-percha tubes were not used at that time, but Cornwall produced Beaumont's notes to show that the critics were wrong.

In an address as beautiful as the painting, Reginald Fitz pictured the Boston of the time. He told of the Harvard commencement of 1839 and sang a song that Holmes actually sang on that occasion. He told about the group of 17 young doctors who under the name of the Boston Society for Medical Improvement met at 7:30 P. M. on the

first and third Monday of each month in a member's home. Frequently older doctors attended the meetings and the artist has shown Dr. Samuel Parkman at this meeting.

In 1843, at the second January meeting, Dr. Pierson reported that Dr. Barker of Salem had recently performed an autopsy on a woman who died of puerperal fever, that he had accidentally wounded himself, and that he was now seriously ill of chills and fever. (He subsequently died.) Dr. Jackson wanted to know if it were possible to contract the disease in such a manner and moved that this question be investigated. The secretary, Dr. Storer, appointed Oliver Wendell Holmes for this task. At the next meeting, February 13, 1843, Dr. Holmes had his report ready. The meeting took place at the home of Dr. Robert Hooker. Dr. Hooker had recently married a Miss Sturgis, daughter of a wealthy Boston merchant, hence the elegance of the surroundings. The first floor of the bride's new home consisted of a front and a back parlour. The artist has depicted the back parlour. The clock on the mantle shows that it is 8:30 P. M. and the pile of loose manuscript on the table shows that Dr. Holmes is nearly through his address. Dr. Fitz surmises that he has gotten to his peroration. "I have no wish to express any harsh feeling with regard to the painful subject which has come before us. If there are any so far excited by the story of these dreadful events that they ask for some word of indignant remonstrance to show that science does not turn the hearts of its followers into ice or stone, let me remind them that such words have been uttered by those who speak with an authority I could not claim. It is a lesson rather than as a reproach that I call up the memory of these irreparable errors and wrongs. No tongue can tell the heart-breaking calamity they have caused; they have closed the eyes just opened upon a new world of love and happiness; they have bowed the strength of manhood into the dust; they have cast the helplessness of infancy into the stranger's arms, or bequeathed it, with less cruelty, the death of its dying parent. There is no tone deep enough for regret, and no voice loud enough for warning. The woman about to become a mother, or with her new-born infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden, or stretches her aching limbs. The very outcast of the streets has pity upon her sister in degradation, when the seal of promised maternity is impressed upon her. The remorseless vengeance of the law, brought down upon its victim by a machinery as sure as destiny, is arrested in its fall at a word which reveals her transient claim for mercy. The solemn prayer of the lithurgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril. God forbid that any member of the profession to which she trusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly, or selfishly!"

At the end of the address Dr. Jackson moved that the essay be published. The motion was seconded by Dr. Storer and was carried. Accordingly it was printed in the April number of the *"New England Quarterly Journal of Medicine and Surgery"*, a short-lived journal with a small circulation. Dr. Fitz left the story at this point. The brave words of Dr. Holmes made little impression in Boston, for it was forty years before the principles enunciated were adopted at the Boston Lying-In Hospital. In 1883, a former interne brought back news of Breisky's brilliant results in preventing puerperal fever at Prague. Worcester, the resident at the time, took advantage of the chief's vacation to try out the technic and, by the end of the vacation, the technic was firmly established.

Fortunately, the professors of obstetrics at the two Philadelphia medical schools ridiculed Holmes' idea. This gave him the opportunity of reprinting the essay and of indulging in characteristically effective sarcasm in its introduction. The essay with

its new introduction was reprinted in 1855. This is the essay that appears in Holmes' collected works and in his volume of medical essays. It is readily available in one of the many editions. The original essay is quite rare. It was reprinted in 1936 in the first volume of *Medical Classics*. In it Holmes has fifty references, mostly British, and it is remarkable that he could have written the essay in such a short time. He marshalls his facts in so orderly and convincing a manner that it is one of the great medical essays of all time.

When Holmes wrote "The Contagiousness of Puerperal Fever", he was thirty-four years of age. The artist has painted him with an attractive youthful countenance. In 1849 when he was forty years of age, he had begun to wear side whiskers, and in 1854 the whiskers had extended under the chin and he was beginning to look like the pictures we commonly associate with the "Autocrat".

J. McCaw Tompkins, 1883-1946

THE death of Dr. J. McCaw Tompkins on August 23, 1946, marks the passing of an era in medicine. By inheritance and training he represented the best in medicine. He was preeminently a family doctor. Although he kept up on laboratory methods and made use of them, he did not blindly follow laboratory findings as if they were infallible. He certainly did not let them mislead him. To him, the patient and his environment, both physical and psychological, were of utmost importance. Today we hear much about the science of medicine in contradistinction to, and perhaps to the belittlement of, the Art of medicine. Mac Tompkins was the very embodiment of the Art of medicine.

Dr. Tompkins was the oldest son of Dr. Christopher Tompkins who was Dean of the Medical College of Virginia. His grandfather on his mother's side, Dr. James B. McCaw, was also a distinguished and greatly beloved physician in Richmond, and his great aunt, Captain Sally Tompkins, was "the lady with the lamp" of the Civil War.

McCaw Tompkins was a pupil of McGuire's University School. He graduated B.A. at the University of Virginia in 1903 and M.D. at the Medical College of Virginia in 1906. After an internship at the Memorial Hospital, he took postgraduate training in Boston, New York, and Baltimore. When he returned to Richmond in 1907 he was in intimate association with his father, Dr. Christopher Tompkins, and with Dr. George Ben Johnston, and received what was probably the most valuable part of his medical education. He was a member of the Richmond Academy of Medicine, the Medical Society of Virginia, and the American Medical Association. For eight years he was editor of the *Old Dominion Journal of Medicine and Surgery*. He was president of the Johnston-Willis Hospital, Inc., a member of the faculty of the Medical College of Virginia, and since 1941 a member of the Board of Visitors of that institution.

Although he took an active part in the civic and social life of Richmond, he never married. His fraternal memberships included Dove Lodge, Number 51, A. F. & A. M., Meridian Lodge, Number 284, A. F. & A. M., and the Lions Club. He was a former president of the old Westmoreland Club, and a member of the Commonwealth Club, the Country Club of Virginia and the Richmond German Club, but above all he was a Master of General Medicine.

SOCIETIES

The Fairfax County Medical Society,

At its annual meeting in August, elected the following as officers for the coming year: President, Dr. Alice Kiessling, Falls Church; vice-president, Dr. William Meyer, Herndon; secretary, Dr. T. B. McCord, Fairfax; and treasurer, Dr. Emanuel Newman, Vienna. At this meeting delegate and alternate to the State meeting were also elected.

The Fourth District and Southside Virginia Medical Society

Met at South Hill, on August the 27th, with Dr. W. D. Kendig, president, in the chair. The following program was presented:

Some Interesting Features of Endocrine Metabolic Disturbances with Special Reference to the Skin—William S. Sloan, M. D., Petersburg.

Recent Changes in the Treatment of Venereal Diseases—E. M. Holmes, Jr., M. D., Richmond.

Recent Advances in Dermatologic Therapy—Allen Pepple, M. D., Richmond.

Discussion of Public Relations—Henry S. Johnson, Director, Public Relations and Medical Service, Medical Society of Virginia, Richmond.

Dinner followed the scientific program, after which a short business session was held. It was decided to have only three official meetings of the Society each year in view of the fact that the Society participates in the clinics put on by the Raiford Clinic in the summer months.

The December meeting of the Society will be held in Petersburg.

Loudoun County Medical Society.

At a recent meeting of this Society, the following officers were elected: President, Dr. John A. Gibson, Leesburg; vice-presidents, Dr. J. T. Jackson of Leesburg and Dr. W. P. Frazer of Purcellville; and secretary-treasurer, Dr. A. C. Echols of Purcellville, succeeding Dr. G. H. Musgrave, Leesburg, who has served in this office for some years.

Delegate and alternate to the State meeting were also named at this time.

Southampton County Medical Society.

At the meeting of this Society on August 29, delegate and alternate to the Virginia Beach meeting of the State Society were named and Dr. T. Addison Morgan and Dr. Clifford F. Gryte, both of Franklin, were elected president and secretary, respectively.

The Wise County Medical Society

Entertained its members at Hotel Norton on the evening of August 21. Dr. Glen Foster of Stonega presided and introduced Dr. Joseph R. Blalock of Marion, who spoke on Psychiatry in General Medicine, and Mr. Henry S. Johnson, Director of Public Relations and Medical Service of the State Society, who discussed Public Relations.

Dr. J. D. Culbertson of Coeburn and Dr. Thomas J. Tudor of Norton are president and Secretary, respectively, of this Society.

Virginia Peninsula Academy of Medicine.

At the meeting of the Academy on September 17, Dr. Paul D. Camp of Richmond spoke on The Differential Diagnosis of Rheumatic and Syphilitic Heart Disease. There was an attendance of seventy-five.

Officers of the Academy are President, Dr. Robt. H. Wright of Phoebus; vice-president, Dr. George G. Hankins of Newport News; and secretary-treasurer, Dr. Chester D. Bradley, also of Newport News.

NEWS

Continuation Course in Electrocardiography.

The Medical College of Virginia is offering a course in electrocardiography designed for those physicians who understand the basic principles of the electrocardiogram and its interpretation, but who wish the opportunity to review a wider variety of tracings.

It will consist of weekly two-hour sessions, at which time routine tracings, both normal and abnormal, will be presented for discussion and interpretation. Doctors participating will be invited to bring unusual tracings for discussion.

The first of these meetings will be held Friday, November 1, 1946, 2:00-4:00 p.m., and weekly thereafter through May, 1947.

This course, and others to be announced, will be subsidized by a grant from the Kellogg Foundation. A registration fee of $5.00 will be charged each enrollee.

Doctors interested in this course may communicate with Dr. James P. Baker, Director Continuation Education, Medical College of Virginia, Richmond 19, Virginia.

The Southern Medical Association

Is holding its fortieth annual meeting in Miami, November 4-7, under the presidency of Dr. M. Y. Dabney of Birmingham. A clinical program will be sponsored by the local profession on Monday afternoon and Tuesday morning, and the various sections and special societies will commence their programs on Tuesday afternoon.

Registration, all exhibits, motion pictures and some meeting rooms will be in the Municipal Auditorium in Bay Front Park on Biscayne Blvd. All meeting rooms not in the Auditorium are easily accessible. The hotel accomodations offered by Miami, the lovely weather, and the natural attractions offered by this city and surrounding country, should help make this a banner meeting.

Dr. Fred J. Wampler

Formerly of Richmond, has been appointed Health Officer of the Page-Warren-Shenandoah Health District, with headquarters in Luray. He assumed his duties as of September 9.

Dr. Claude L. Neale,

Who for the past four years has been Assistant Professor of Psychiatry at the Medical College of Virginia, is now associated with Dr. R. Finley Gayle, Jr., in the practice of Neurology and Psychiatry, with offices at 409 Professional Building and Medical College of Virginia. Dr. Neale is a Diplomate of the American Board of Neurology and Psychiatry and a Fellow of the American Psychiatric Association.

Graduate Course in Ophthalmology and Otolaryngology.

Gill Memorial Hospital, Roanoke, announces that it will hold its twentieth annual Spring Graduate Course in Ophthalmology and Otolaryngology at the Hospital, on April 7-12, inclusive, 1947.

Dr. Roshier W. Miller Injured.

On September 10th, while crossing the street in front of his home in Richmond, Dr. Miller was struck by an automobile and seriously injured. However, as the *Monthly* goes to press we are advised that he is improved and hopes to be out soon. Dr. Miller is a past president of the Medical Society of Virginia and has always taken an active part in all of its work.

Dr. E. E. Barksdale,

Formerly of Danville, recently separated from the Navy, has located in Washington, D. C., with offices at 1801 K Street, Northwest, and will limit his work to dermatology and syphilology. He will also assist Dr. J. W. Love in Alexandria in handling the Syphilis Clinic in that city.

Dr. M. J. W. White,

Who has been at Davao, Philippine Islands since the first of the year, with the American Board of Commissioners for Foreign Missions of the Congregational Christian Church, has returned to this country and will practice again at Luray.

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons

Met again this year at the Homestead, Hot Springs, Va., September 5-7, with Dr. Lewis F. Smead of Toledo presiding. An excellent program was presented. At the closing session, Dr. A. D. Campbell of Montreal, Canada, succeeded to the presidency. Other officers named to serve with him are: Dr. Robert D. Mussey of Rochester, Minn., as president-elect; Dr. A. P. Leighton of Portland, Maine, as vice-president; Dr. James R. Bloss of

Huntington, W. Va., as secretary; Dr. Leroy A. Calkins of Kansas City, Kan., assistant secretary; and Dr. Ward F. Seeley of Detroit, Mich., treasurer. The three last named were re-elected.

The Society voted to hold its 1947 meeting at the Homestead, also, during the first week in September.

Dr. Ashby Coleman,

Recently separated from the Navy, has located for practice at Altavista. For a short time before entering the Service, he was at Jewell Valley.

Dr. William R. Bond

Has returned to Richmond after eight years' affiliation with the Medical Research Division of Schering Corporation, Bloomfield, New Jersey, and he will now be associated with VanPelt & Brown as Director of Medical Research.

Dr. Bond is a graduate of the Medical College of Virginia in pharmacy (1921) and in medicine (1928), and prior to leaving Richmond was professor of physiology in his alma mater.

Community Chests.

During the month of October Community Chests all over the state of Virginia will campaign for funds to support Red Feather Services during 1947.

Visiting nurses, hospital and clinic services are all supported by the Community Chest to raise the health standards of the community. These agencies provide medical care and attention for needy patients who would otherwise be lacking facilities for treatment.

"Everybody benefits—everybody gives," the 1946 slogan which will be used in most of the campaigns, sums up the need for your financial aid to the Community Chest in your area. Your medical knowledge should spur your interest in the humanitarian work of the Community Chests and Councils of Virginia.

Van Meter Prize.

The American Association for the Study of Goiter again offers the Van Meter Prize Award of Three Hundred Dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The Award will be made at the annual meeting of the Association which will be held in Atlanta, Georgia, April 3-5 1947, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English; and a typewritten double spaced copy sent to the corresponding secretary, Dr. T. C. Davison, 207 Doctors Building, Atlanta 3, Georgia, not later than January 1st, 1947. The committee, who will review the manuscripts, is composed of men well qualified to judge the merits of the competing essays.

Dr. T. Wiley Hodges,

Formerly of Fort Worth, Texas, recently separated from the Army of the United States, announces the opening of his office at the Medical College of Virginia Hospital. Dr. Hodges has been appointed assistant professor of Orthopedic Surgery at the College.

Dr. E. T. Terrell,

Who was on the staff of the Eastern State Hospital prior to entering the Service, announces that he is home again and is now connected with the Veterans Administration Hospital, at Richmond.

Dr. G. C. Honeycutt,

Class of '45, Medical College of Virginia, later interning at State of Wisconsin General Hospital at Madison, has located for general practice at Gate City, this State.

Dr. Fleming Wood Gill,

Recently returned from Service, has located in Richmond and is associated with Dr. Thomas F. Gill and Dr. James T. Gill in general practice, with offices at 2924 Chamberlayne Avenue.

Dr. F. S. Givens,

Who has practiced for a number of years in Wise, announces his removal to Roanoke, where he will be located at 1919 Round Hill Avenue.

Married

Dr. Claude C. Coleman, Jr., and Miss Jeannette Murdoch Kayhoe, both of Richmond, September 7th. He is a graduate of the Medical College of Virginia, class of 1946, and is at present serving an internship at the University of California Hospital, San Francisco.

Lieutenant Thomas Newton Davis, III, USA Air Forces, Lynchburg, and Lieutenant Joyce Green, ANC., Bluefield, W. Va., September 26th. He is

a graduate of the University of Virginia Medical School in 1944, and is now stationed at Borinquen Field, Puerto Rico.

Civilian Consultants.

Two Virginia doctors are included in a group of 111 medical men appointed as civilian consultants to the Secretary of War. Dr. John B. McKee, Winchester, has been named in the internal medicine group, and Dr. Benjamin W. Rawles, Jr., Richmond, in the surgical group.

Dr. I. A. Bigger,

Richmond, professor of surgery at the Medical College of Virginia, has been named associate editor of the American Practitioner, a new monthly publication released by J. B. Lippincott Company in September.

The Southeastern Allergy Association

Will hold its second annual meeting January 18 and 19, at The Atlanta-Biltmore Hotel, Atlanta, Georgia. Hotel reservations should be made directly with the hotel. Dr. Hal McCluney Davison, Atlanta, is president; Dr. Warrick Thomas, Richmond, vice-president; and Dr. Katharine Baylis MacInnis, Columbia, S. C., secretary-treasurer.

New Appointments.

Dr. D. L. Harrell, Jr., has been named superintendent of the Lynchburg State Colony, being transferred from Western State Hospital where he was also superintendent. Dr. Harrell was formerly assistant superintendent at the Colony, later being appointed to the Petersburg State Colony and in 1943 to Western State Hospital.

Dr. James Brooke Pettis has been named to succeed Dr. Harrell at Staunton. He is returning to the State Hospital system after being on military leave since January 1941. He was formerly director of clinical psychiatry at Western State.

Released From Service.

The following names have recently been reported as having been released from Service and back in private practice:

Dr. Robley C. Allison, Petersburg

Dr. W. E. Dickerson, Danville

Dr. P. H. Drewry, Jr., Richmond

Dr. Richard F. Hawkins, Lynchburg (now Lewisburg, West Virginia).

Dr. Brooke B. Mallory, Lexington.

Dr. E. V. Richardson, Marion.

Dr. E. H. Williams, Richmond.

American Board of Obstetrics and Gynecology, Inc.

The next written examination (Part I) for all candidates will be held in various cities of the United States and Canada on Friday, February 7, 1947, at 2:00 P.M. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held later in the year. All applications must be in the office of the Secretary by November 1, 1946. Address Paul Titus, M. D., Secretary, 1015 Highland Building, Pittsburgh 6, Pennsylvania. Candidates in military service are requested to keep the Secretary's Office closely informed of changes in address.

Fall Graduate Instructional Course in Allergy.

Attention is again called to the Fall Graduate Instructional Course in Allergy presented by the American College of Allergists under the auspices of the Jefferson Medical College, Philadelphia, November 4-9 inclusive. Headquarters will be at the Benjamin Franklin Hotel in that city. The fee for the course is $100. For those in or just returned from military service, the tuition is reduced to $25. This covers forty-six lectures or presentations or clinics. A limited number of scholarships are available. Address inquiries or communications to the office of the Secretary, 423 La Salle Medical Building, Minneapolis 2, Minnesota.

Dr. Henkel M. Price,

Martinsville, is taking special work at the North Carolina Baptist Hospital, Winston-Salem, N. C., until April 1, 1947.

Dr. J. Langdon Moss,

Who has been practicing in Newport News since his separation from the Service, has located in Louisa, where he has taken over the office of Dr. H. G. Byrd.

Dr. W. Ambrose McGee,

Richmond, announces removal of his offices to 1001 West Franklin Street, this city.

Officers in Association of Chest Physicians.

At the annual meeting of the American College of Chest Physicians in June, Dr. Dean B. Cole of Richmond was elected regent of the College for Dis-

trict No. 4, which comprises the states of Virginia, Maryland, West Virginia and the District of Columbia.

Dr. Edgar C. Harper, also of Richmond, was appointed Governor for the State of Virginia.

For Sale:

Elliot's Machine, in first class condition, $75.00. Address "Elliot" care Virginia Medical Monthly, 1200 E. Clay Street, Richmond, 19. (*Adv.*)

For Rent:

Office of the late Dr. W. J. Knight. Good opening for a doctor wishing to make a change, or for a young doctor just starting practice. Contact Mrs. W. J. Knight, 2405 Chestnut Avenue, Newport News, Va. (*Adv.*)

For Sale:

Practically new Sphygmomanometer, and microscope suitable for doctor's office. Write Mrs. W. J. Knight, 2405 Chestnut Avenue, Newport News, Va. (*Adv.*)

Established Hospital For Lease Or Sale:

A Sanitarium for nervous, mental, alcoholic and drug cases, doing an excellent business. Established in 1904. It is necessary to see the institution to appreciate its real value. Write Dr. E. W. Stokes, 923 Cherokee Road, Louisville 4, Kentucky, for further information. (*Adv.*)

Wanted—

Before November 1st, general practitioner. Twenty-five miles of Richmond, Virginia. Should gross from $12,000 to $14,000 annually. No competition. Office furnished. Write "Location," care this journal, 1200 East Clay Street, Richmond. (*Adv.*)

An Appointment In E.E.N. And T.

Available October 1 at Raiford Clinic, Franklin. Address the Administrator, Raiford Memorial Hospital, Franklin, Virginia, for further details. (*Adv.*)

For Sale—

Cheap to quick buyer. One Elliott Treatment Regulator for administering Elliott treatment, 110 volts, AC or AD.

One McIntosh Portable Diathermy Apparatus. 110 volts.

One Telatherm, Jr. Wappler Electric Machine, portable, 110 volts. One Arnold Steam Surgical Dressing Sterilizer for office use. Communicate with Dr. R. D. Glasser, 718 Medical Arts Building, Norfolk 10, Virginia. (*Adv.*)

For Sale

Surgical instruments and medical library. Mrs. C. R. Wharton, Ruffin, North Carolina. Phone 2812. —(*Adv.*)

For Sale:

GE X-ray, Model 1775; 30 ma, 85 KVP, table with Bucky; in excellent working condition. James P. King, M. D., Radford, Virginia. (*Adv.*)

New Books

Received at the Library of the Medical College of Virginia available to our readers:

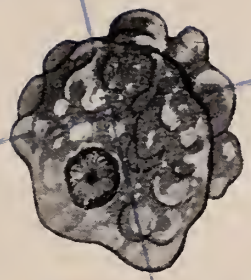
Allen—Medical education and the changing order.
Aschner—Treatment of arthritis and rheumatism in general practice.
Banyais—The pneumoperitoneum.
Bell—Renal diseases.
Bernthsen—Textbook of organic chemistry.
Bogomolets—The prolongation of life.
Braus—Anatomie des menschen.
Brooks—The permeability of living cells.
Castroglioni—Adventures of the mind.
Collens—The modern treatment of diabetes mellitus.
Crile—Hospital care of the surgical patient. A surgeon's handbook.
Davis—Women's medical problems.
Freeman—Mastering your nerves.
Herndon—An introduction to essential hypertension.
Kalinowsky—Shock treatments and other somatic procedures in psychiatry.
Johnson—Looking toward marriage.
Popenoe—Building sex into your life.
Popenoe—Marriage: before and after.
Popenoe—Preparing for marriage.
Powers—Chemotherapy.
Quiring—The extremities.
Saphir—Autopsy diagnosis and technic.
Schroedinger—What is life?
Segal—Synopsis of pulmonary tuberculosis.
Soffer—Diseases of the adrenals.
Soskin—Carbohydrate metabolism.
Urbach—Skin diseases, nutrition and metabolism.

OBITUARIES

Dr. Quintus Harper Barney,

Altavista, died suddenly on July the 16th, at the age of fifty-three. He was born in Wardensville, W. Va., and graduated from the Medical College of Virginia in 1916. Following this, he served an internship at St. Luke's Hospital, Richmond, until he entered the Army Medical Corps with Base Hos-

practically everywhere



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pital No. 45 (McGuire Unit) in World War I. Dr. Barney was prominent in church work and was a member of the Lynchburg Academy of Medicine, the Medical Society of Virginia, and the Southern and American Medical Associations. He was recently re-elected to the town council of Altavista, was a past president of the Lions Club of that place, an Elk and a Mason. He is survived by his wife and two sons, one of them Dr. William H. Barney, now interning at Lewis Gale Hospital, Roanoke.

The following appreciation of Dr. Barney was published in the local newspaper:

"WHAT YE DO UNTO THE LEAST OF MY BRETHREN—"

The cold, impersonal finger of death reached into Altavista Tuesday morning, and the chill of the encounter persists. A part of the warmth of the community was taken away when the soul of Dr. Q. H. Barney was called from its temporal existence here.

The "Doc" will be long remembered; the sorrow of his passing will not be soon forgotten.

Stories of his kindness, generosity, loyalty to the oath of his profession, and zeal to the town's welfare will for many years be related by people who were merely passing acquaintances. All of these stories no one man can recall because they are scattered throughout this section of Virginia in the minds of people who have occasion to remember the kind Doctor, always so willing to travel any distance to relieve suffering; they are stories that can be told by the Councilmen who have seen the "Doc" exert himself in behalf of the town when he plainly showed that he was physically exhausted; they are tales that may never be put into words by small children comforted or encouraged by the busy man who could always stop to hear other troubles.

The practice of medicine was a natural place for Q. H. Barney. He had the honest desire to help humanity that has made the medical profession revered. His practice was vitally a part of him—he found comfort for himself in helping others; his practice was never a service that was sold or refused for dollars and cents.

Dr. Barney worked himself to death because he conscientiously felt his great responsibility to the people of this section. Not content with driving himself day and night to answer calls from the rich and the poor, the white and the black, those he knew and those he had never heard of—he asked for still more of a burden by asking for election to the Town Council. He had an insatiable urge to expend himself for other people.

On the Council he was irreplaceable. As Sanitary officer of the town he knew the bad conditions that exist here, and was not hesitant to recommend reforms; as a Councilman he was progressive, one who could look forward to envision the total advantage of any program.

It was Dr. Barney's desire to be buried in Altavista, but no lots in the cemetery here were available. It is sad that such a small wish by such a great citizen could not be satisfied.

Possibly other doctors ascribe Dr. Barney's death to a weak heart, but as men talk to other men, Dr. Barney had no weak heart; he possessed a strong heart, a big heart, and a full heart. He died because he crowded too many lives into his own.

Dr. Robert Lee Schuler,

Rockingham County physician, died at 65 years of age on August 17, at Johns Hopkins Hospital, Baltimore, Maryland, following an operation a few days previously. The cause of death was carcinoma of the stomach. After his graduation from Chattanooga Medical College in 1907, Dr. Schuler practiced in Marion, and then served eight years as company physician for the Hassenger Lumber Company of Konnarock. He settled permanently in Broadway in 1928, where he has since served as a staff member of the Rockingham Memorial Hospital in addition to his other duties. He was active in selective service work in both World Wars and was a member of the American Medical Association and the Medical Society of Virginia.

Dr. Daniel Edward Remsberg,

Roanoke, died September 14th, at the age of seventy-three. He received his medical degree from the University of Maryland in 1905. He went to Roanoke in 1917 as medical examiner at the Norfolk and Western Railway shops, and in 1920, was appointed medical director. He was a member of the Medical Society of Virginia. His wife and two children survive him.

Dr. Ephraim Rufus Miller,

Prominent physician of Harrisonburg, died August 30th after a short illness. He was seventy-three years of age and a graduate of the Medical College of Virginia in 1898. Dr. Miller practiced for a short while at Bridgewater before locating in Harrisonburg where he specialized in eye, ear, nose and throat. He was very active in civic and religious affairs, was one of the founders and first treasurer of the Rockingham Memorial Hospital, and was for sometime a member of the Medical Society of Virginia. A son and daughter survive him. A brother is Dr. J. D. Miller of Bridgewater.

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*Frazer, J. G.: The Golden Bough, vol. 1, New York, Macmillan & Co., 1923

It is ironical that the practice of attempting to cure rickets by holding the child in the cleft of an ash tree was associated with the rising of the sun, the light of which we now know is in itself one of Nature's specifics.

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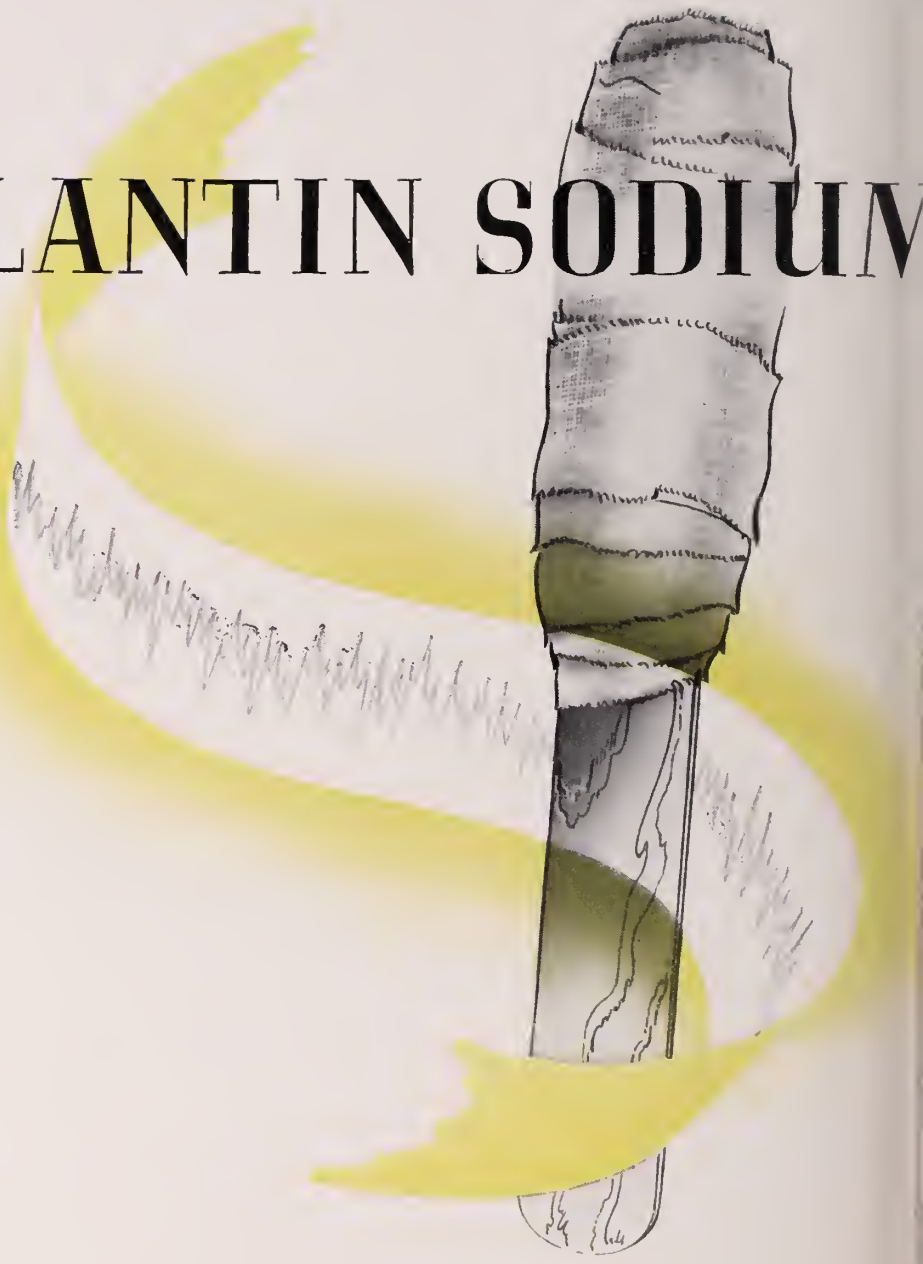

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THE PHYSICIAN'S RESPONSIBILITY TO HIS COMMUNITY*

JULIAN L. RAWLS, M.D.,
Norfolk, Virginia.

Presidential addresses usually take one of three forms: they are either a scholarly address on some scientific aspect of medicine, a biographical sketch of some illustrious disciple of Aesculapius, or a discussion on the economics of medicine. I have chosen the latter.

If we measure our evolutionary progress in five year periods, as do our Slavic neighbors, there has never been a five years that has marked such a change either in the science of medicine or in the provision for medical care as is occurring now. One of my earliest recollections is the problem of providing medical care, because my Father was a country practitioner and as a very young child I watched his concern, his deep and sympathetic interest in the illnesses of his neighbors. He had none of the scientific help in diagnostic machines and laboratory aids that his sons had, but he was a much better intuitive diagnostician than either of us. So, I have a genuine sympathy for those rural communities that are now so deeply in need.

Within the last generation people have suddenly realized that sickness is an inevitable occurrence in practically every one's life and the foreseeing individual has attempted to provide for the payment of that illness when it comes. The law of averages has taught us that if there is some way to spread out this cost over an entire community it is an advantage both to the individual who is ill and to his neighbor who remains well. Our experience in the pre-payment of hospital care has proven the soundness of this. We have been able to figure on the average days of hospital incidence in any given community. We know the per diem cost of hospitalization, so it is a very easy matter to figure how much we should charge for hospital care for persons in any large group. This idea is thoroughly sold to the American people and probably forty million in the United States have protected themselves against hospital expense, either through Blue Cross enrollment or old line insurance companies. Much more recently it has been felt that it is also possible to anticipate the cost of medical care and groups of individuals offering medical coverage are appearing to provide for the catastrophic illness which throws the average American family off its balance and causes it to stagger and stumble along for six months or a year in an attempt to regain its financial equilibrium. The head of that same average family can usually take care of the cost of routine office calls and house visits that might be needed and, if he is an honest American, he does not take very kindly to having a paternalistic government select his physician and pay him.

The American Medical Association feels that the voluntary non-profit plan for pre-paying medical care is the best insurance we have against the federalization of Medicine. It feels that the quicker the Medical Profession realizes this, the sooner the people will protect themselves against unexpected illness and the sooner the Government will desist from trying to force socialized medicine down their throats. It urges that all doctors become members of a Plan to provide this care. The fees may be slightly lower than our private charges, but they are much higher than those that would be paid by federal agencies.

It has been stated that the American people, from a medical standpoint, are very poorly provided for.

*Address of the President at the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14, 1946.

We have all kinds of statistics to prove this. One set of figures that has been widely quoted since the beginning of the War is the large percentage of draftees rejected by their Boards. However, when this has been boiled down it has been found that a very small part of those rejections was due to lack of medical care. A very high percentage was due to illiteracy and many more were for physical defects that could not have been remedied by any form of medical treatment. Recently, a more startling disclosure, about which we hear very little, has been made: this is that the percentage of rejections in the British Isles, where they have had socialized medicine since 1911, was much higher than in the United States.

It is admitted that there is a definite shortage of physicians all over the United States, particularly in rural communities, and Virginia is no exception. Only 12 per cent of the doctors in rural Virginia are under 60 years of age. So, if we expect to provide these areas with medical care, we must induce young doctors to settle in the country. From day to day medicine is getting to be more of an exact science. It is no longer a question of guess work. Doctor John B. Murphy once said that a properly trained physician should be able to make a diagnosis from an accurately taken history. I am very much afraid that many of us are not so well trained as was Doctor Murphy. We frequently need help that the patient himself cannot supply. We need the x-ray and the laboratory and our rural communities should have them.

Our State Commissioner of Health made a valiant effort to provide for this with our last Legislature. He accomplished much but not all at which he aimed. The Legislature appropriated $10,000.00 to make a survey to see where there is the most need for medical facilities and care. That survey is now under way. They were asked to appropriate sufficient money to establish at least six health centers in those districts of the State in which they are most urgently needed. A health center consists of a small hospital of from 15 to 25 beds with a diagnostic x-ray unit and laboratory facilities. None of this money was appropriated. The passage of the Hill-Burton Bill by the Congress in August provides 40 per cent of that money out of the general federal tax funds. So far no provision has been made in Virginia, either out of State funds or private funds, to raise the 60 per cent which must come from the State. In other words, if we do not use Virginia's share of that money, and it would amount to around two and one-quarter million dollars, before the fiscal year ending June 30, 1947, we, as Virginians, will have put into the general funds of the United States Treasury that amount of money for which we will get no returns. We should see that local funds and state funds are made available for this matching.

However, the Legislature did provide for ten scholarships in each of our two medical colleges to be given to worthy young students who would agree to practice one year in a rural community for each year that they used the scholarship. It is not fair to these young doctors to ask them to go to the country without the opportunities and facilities to practice the scientific medicine to which they have been accustomed.

Well meaning social workers and, I hope, equally sincere politicians think they have found a panacea for all of our medical woes in the Federalization of Medicine. We, of the Medical Profession, feel that they are visionary in the extreme. It has never been the history of political medicine that it has been satisfactory either in this country or in any other country in which it has been tried. It usually leads to the deterioration of medical care, to dissatisfaction, both by the patient and by the doctor. The demands on the physician are multiplied beyond measure and frequently without justification. The quality of medical care has just as persistently gone down. The cost, when we evaluate the service rendered, is staggering and prohibitive. There are certain things that are definitely within the province of Government; for instance, the prevention of the introduction of communicable diseases from foreign countries; the prevention of the pollution of our water sheds and the contamination of our public streams.

It is within the jurisdiction of the State Health Department to provide means of preventing such communicable diseases as smallpox, diphtheria, typhoid fever and the like: diseases that are definitely controlled by inoculation and vaccination. We also feel that the control of venereal diseases, the care of the mentally ill, of tuberculosis and of cancer are governmental problems.

We also know that there are certain classes in our community that, from a medical standpoint, are financially unable to make provision for themselves. Sometimes it is due to circumstances over which

they have no control. At other times the individuals are temperamentally unfit to provide for themselves and so become a problem of the community. We feel that provision should be made for these people out of tax funds and that those funds should be provided by both federal and state governments on a definite ratio. However, the money should be spent at state levels and always the need of medical care should be vouched for by the medical profession and the indigency by welfare agencies trained and equipped to evaluate the patient's needs.

The last Legislature placed in the budget of the State Department of Health three hundred thousand dollars for the biennium to provide for the hospitalization of the medically indigent on a matching basis—the State to pay half of the hospital cost and the counties and the cities to pay the other half. The next Legislature should probably double this fund. Our Health Commissioner is now working on the plan for carrying out this bill.

The ten point program of the American Medical Association for the improvement and better distribution of medical care calls for the active support of every doctor in the United States. The leaders of our profession feel very definitely that the indifference of the rank and file of physicians to the things which go to make up our community life is largely responsible for the fact that the guiding and planning of medical care is being taken out of the hands of the profession and is being turned over to social workers, to interested laymen and to politicians. May I tell you a few of the things it is felt should interest you as doctors in your respective communities? You should know the attitude of your State legislators and of your national representatives in Congress to the various things that go to improve the living conditions in your country. It is too late to find out the attitude of your Congressman to certain bills after those bills have already been introduced into committees. As an example, we asked a congressman his reaction to the Wagner-Murray-Dingell Bill and his reply was, "There have been eleven thousand bills introduced into Congress. It would be utterly impossible for any of us to familiarize ourselves with the provisions of all of those bills. Consequently, we are guided largely by the recommendations of the committee to which the bills are referred." In other words, if a bill succeeds in getting out of the committee and goes to Congress for a vote, it is very apt to be passed. As doctors, it behooves us to become familiar with the legislative activities which we feel concern, not only the medical profession, but the health of the state or country as a whole.

Our problem then, is to see that our state and federal legislators be told the effect on our people. They should have our personal communications on pending legislation concisely and succinctly stated, in order to save their time. Then we should see that the leaders in our individual communities fully appreciate the needs and opportunities offered by this legislation. Do not feel that the other fellow will do it. It is your responsibility and mine, and the leaders of our profession say it is our indifference, our lack of interest, in the civic activities of our communities, our more or less parasitic existence, which has brought us to our present pass.

Along this same line I would like to refresh your memory of the story of the efforts of the cultists to secure recognition in Virginia and to prey on those who are so unfortunate as to be sick. They have claimed persecution by the Medical Profession and have almost succeeded in convincing intelligent legislators that the only reason we have been interested in keeping them from securing a license is the financial harm they might do the Profession. As a matter of fact, that side of the situation has never concerned us. What we have been most interested in is their failure to recognize curable conditions until it is too late, and, what is even worse, of guaranteeing cures to the hopelessly ill. Previous to 1913 there was no law regulating cultists in Virginia. At that time a Bill was passed requiring that all who desired to treat the sick must be licensed by the State Board of Medical Examiners. Since the Bill could not be made retroactive it allowed all who could prove that they were practicing in Virginia prior to 1913 to obtain a license without appearing before the Board. Some eight or nine chiropractors were admitted under the so-called Grandfather Clause. From then until 1944 they made repeated attempts to be allowed to set up a Board of their own and to license the graduates of their own schools. In 1944 the Legislature passed an Act putting on our State Board of Medical Examiners two chiropractors and one naturopath to pass on the qualifications of their own particular cult. But the same Act also required that all individuals licensed to treat the sick must take the same Basic Science Board. That was a death blow

to the cultists. They could no longer claim that they were being persecuted and not allowed to practice their particular brand of the healing art. That opportunity was being given them provided they could prove that they knew the fundamentals of the cause of diseases.

They immediately tried to introduce another Grandfather Clause permitting all who could prove that they were practicing in the State previous to 1944 to be given a license without the necessity of taking this examination. That Bill was killed. In 1946 it came up again and the interesting thing is that some of the most intelligent members of our legislative body voted in favor of this effort to circumvent the basic principles of the art of healing the sick. They have already given notice that a similar Bill will be introduced in the 1948 Legislature. It is quite evident that the efforts to defeat this Bill should be made by every doctor in the State of Virginia. We should see that our own representatives in the Legislature fully appreciate the significance of the attempts to turn loose in Virginia some seventy-five men who have not the slightest idea of the causes of diseases or how to cure them. This is our task. Please see that you make it your business to know personally your legislators and to see that they are properly informed.

For generations the practice of medicine was an individual thing. Doctors stood alone. Gradually they began to feel the need of other doctors. From this came the formation of clinics; of group practice and, in time, the birth of the specialization of medicine. At the present time there is need of an even greater consolidation of our profession. I am not advising that we carry this to the point that Labor has done, but we can learn a good deal of what can be gained by strength in union. The day has passed when doctors can practice medicine as individuals even in the scientific sense. Just as we need the cooperation of our brother practitioners in the care of our patients, just as certainly do we need the united opinions and the united actions of the entire medical profession in accomplishing the things we have set out to do. This year our Public Relations Committee felt this so strongly that it asked the Council to set up a Public Relations Department with a Director in charge. His purpose is twofold; to act as a Liaison Officer between the county societies and the State Society and to disseminate knowledge and understanding between the general public and the medical profession. We have also learned from Labor that it is necessary to have funds to accomplish any of the things that are worth while. We knew that if we were to carry on with this Public Relations Department it would be necessary to increase the dues of the Society. The small sum that we have been paying a year is almost infinitesimal in comparison with the dues of most of the State Societies. The increase that we are asking is much less than that of almost all of the societies which have been outstanding in what they have accomplished for the good of the medical profession. If we expect our Profession in Virginia to take the place which it should in our care of the citizens, it is necessary that there should be an increase in our dues. It is small as compared with what we pay for golf clubs, social activities and so forth.

I spoke a few minutes ago of the cooperation on the part of the entire medical profession. The Medical Society of Virginia has less than 2,000 members. I have been told that there are nearly 1,000 physicians practicing in Virginia who are not members of our Organization. This is entirely wrong. Every reputable physician in the State should be a member of the State Medical Society and every effort possible should be made to find out why he is staying out. The Councilors of the various districts should make it their business to see that he becomes a member of his County and his State Societies. We want his interest and his cooperation. Only in this way can the Society grow in strength and usefulness. I have felt this so keenly, I have asked our new Director of Public Affairs, Mr. Johnson, to make it one of his duties to see that the Councilors of the various districts are informed of the ethical doctors in their area who are not in the Society. I hope when this year is over your incoming President can tell you that he has succeeded in enrolling every reputable physician in the State. Let us determine tonight that we will accomplish this.

I am sure that all of us have read with a great deal of concern the criticisms (which have been appearing in the lay press) on the care of the mentally ill in the United States. If we are at all frank about it we have to admit that the medical profession has been negligent in its care of these unfor-

tunate people. Apparently, what started the investigations that led to the magazine articles, was the report made by conscientious-objectors who had been drafted and then placed in mental hospitals as orderlies because they refused to do military duty. It is not very pleasant to have to realize that the criticism of the kind of treatment these unfortunate individuals receive came from lay people.

Our Committee on Mental Hygiene has submitted to us a very illuminating report on the per capita appropriation for the care of the mentally ill in Virginia. I urge you to read it carefully.

Let us look briefly at some of the things that your State Health Department has already done for the improvement of living conditions in our Commonwealth and at some of the objectives for which they are still striving. At present, there are fifty-one counties in the State which have the benefit of a local health service. As soon as personnel is available, sufficient appropriations should be given the Department to provide this service for every county in the State. Sixteen additional counties have made appropriations, but the personnel is not now available.

The last Legislature appropriated money for a survey of all school children in the State; however, it did not make any appropriation for the correction of remedial defects for children whose families were unable to pay for it. This should be one of the primary objectives for our next Legislature. No child in Virginia should be allowed to go through life physically handicapped because of defects in vision, in hearing, or other deformities, which are correctable in youth. Each year sees us better equipped to detect early tuberculosis and to provide for its care. The same should be equally true of the disabling effects of acute infectious endocarditis.

Sufficient funds should be placed in the hands of the State Health Department to provide for the victims of cancer and to provide for proper terminal care for these unfortunates. We are too short of hospital beds in the general hospitals to house these people for indefinite periods for nursing care. Homes for incurables are usually some distance from their families and we always hate to condemn people who have a long period of hopeless illness before them to spend that time among strangers. But it is a fact that a good many of these families are utterly unable to provide care for them in their own homes. It is always a daily problem for those of us who are associated with Cancer Clinics to know just what to do with them. The funds raised by voluntary subscription are inadequate to care for both the hopeful and hopeless cases. This should be a state and community responsibility. The last Legislature was asked to make some provision for them. It appropriated $13,500.00 a year for the two years to make a survey of the amount of cancer in the State. It is thought that, probably, the figures will be so startling that in 1948 we may have a more responsive Legislature to the needs of these unfortunates. The traveling clinics and x-ray units, supplied by the State Health Department, and the Anti-Tuberculosis League, are annually lowering the death rate in tuberculosis. There is every reason to feel that a similar study on cancer will increase the curability of patients, because we will see them earlier.

The State Health Department, with the aid of the Public Health Service, is making a valiant effort to stamp out venereal diseases. It is fairly well acknowledged that both victims of syphilitic and Neisserian infections can be rendered immune in about two weeks' time if properly treated with sulfa drugs and penicillin. Our Health Department will supply us with the drugs. It is up to us to use them.

I visualize Virginia as a land of plenty, its citizens a happy people, free from want, free from crippling diseases. I also visualize the medical profession as the outstanding agent which will accomplish this. It will require our untiring efforts, a devotion to duty, which the medical profession has always shown, and I am sure that we, of this generation, will carry on with the aims and objectives which our fathers gave us to the end that our children and our children's children will know neither want, nor care, nor physical disability, that we, as a profession, can prevent.

CHOICE OF ANESTHETIC AND AVOIDING COMPLICATIONS*

CLESS Y. FORDYCE, M.D.,
Baltimore, Maryland.

Before presenting my ideas in regard to the choice of anesthetic agents, I believe it would be quite fitting to briefly summarize the present day concepts of the theories of anesthesia and review the physiology of respiration as it concerns the anesthetist. I mention this because most medical schools present very little information to the student concerning anesthesia and its problems.

Anesthesia has been defined as the art or science of rendering a person insensible to pain. The explanation of the action of local anesthesia is simple; by means of various agents injected into or around nerves, we interrupt the flow of afferent stimuli and prevent their passage on to the higher centers in the cerebral cortex where they would be interpreted as painful sensations.

As regards general anesthesia, the cerebral centers are gradually depressed until they have lost their ability to function in a normal manner. Exactly how this depression takes place has never been satisfactorily explained, but we have various theories in regard to the actual mechanics of the depression. A good premise upon which we can start is that the brain cells are the most highly developed cells of the body. Consequently, they have a high metabolic activity and need more oxygen than other cells in the body. This furnishes us the reason for the very bountiful blood supply to the brain.

The method of action of the anesthetic drugs when they come in contact with the brain cells is a complex affair and of the many theories advanced, none has been universally accepted. All of our anesthetic drugs have a high fat-solubility and it is true that the higher the solubility ratio of a drug, the more potent is its anesthetic qualities. The anesthetic drugs seem to have a predilection for the brain cells. This has been shown by analyses of various tissues in the bodies of animals to whom an anesthetic has been given. The brain cells have a higher content of the drug than the other tissues of the body.

The theories of cerebral depression fall into two main groups: one, that the drug acts directly on the intracellular protoplasm in such a way that its receptivity or ability to use oxygen is gradually lessened. The second group base their beliefs upon the premise that the drugs alter the permeability of the cell membrane which results in a gradual lessening of the amount of oxygen passing through to the cell protoplasm. Whatever the *modus operandi,* the net result is a gradual lessening of the amount of oxygen available for the metabolism of the cerebral cells which causes increasing depression and anesthesia.

The higher faculties are those first affected, namely, thought and perception. Loss of muscular sense and coordination of movement soon follow. Then we have the loss of tactile and special senses, at which time the patient is considered to be in the state of analgesia. Practically the last special sense to be lost is that of hearing which should always be borne in mind by those present during the induction of an anesthetic. Muscle tone gradually disappears and the elimination of the various reflexes begins. At this point the patient is considered to be in the state of surgical anesthesia. If the anesthetic is continued beyond this point of depression, we have a gradual loss of function of the vital medullary centers controlling respiration and circulation.

The cells of the nerves themselves are affected to a much lesser degree and, especially during light anesthesia, the cerebral cells are constantly being approached by the afferent impulses but in their depressed state they do not function and no pain is realized.

It must not be assumed that all oxidative and metabolic processes are entirely suppressed by anesthesia; on the contrary, they are only diminished, and when the anesthetic agent is removed there is complete recovery of cell function. In anesthesia, we endeavor to maintain the normal oxygen tension in the blood, at times considerably exceeding the normal percentage, but due to the peculiar action of the anesthetic agents in use the ability of the brain cells to utilize the oxygen at hand has been lessened

*Read before the Virginia Peninsula Academy of Medicine, Newport News, April 15, 1946.

to such a degree that anesthesia has resulted. Of course, we can produce unconsciousness by simply depriving an individual of his normal supply of oxygen. This may be demonstrated by the administration of an inert gas such as nitrogen. In such an experiment, all the cells of the body suffer from anoxia. It is true the nitrous oxide which is one of our oldest agents and also one of our less potent drugs does lessen the percentage of oxygen in the blood but that does not mean that its anesthetic action is due to that property alone. For instance, let us consider an elderly anemic patient who is quite wide awake in normal air which contains oxygen 20.96 percent, nitrogen 78 per cent, and a small percentage of other gases. Let us administer a gaseous mixture containing the same amount of oxygen but substitute nitrous oxide for the nitrogen in the mixture and the patient promptly loses consciousness and may attain a fair degree of relaxation. However, the presence of nitrous oxide in the blood does decrease the oxygen-carrying capacity of the red blood cells and for this reason, nitrous oxide is not considered a suitable anesthetic for long operations in patients suffering from myocardial damage where the heart muscle needs a liberal supply of oxygen.

The purpose of respiration is two-fold in character—to obtain oxygen and maintain its normal percentage in the blood, and to eliminate carbon dioxide, the end product of oxidation. A number of different muscles are employed in the act of respiration. The diaphragm in contracting lowers its concavity in the chest and pushes against the abdominal viscera, thus enlarging the thoracic cavity. When it relaxes, the abdominal muscles contract to aid in restoring the diaphragm to its thoracic position. The external intercostals contract and elevate the ribs during inspiration, following which the internal intercostals contract and depress the ribs. The sterno-mastoid, pectorals and trapezius which are often called the accessory muscles of respiration are used only in emergencies, such as obstruction to respiration or very deep anesthesia where the act of respiration is not furnishing a sufficient amount of oxygen for the body metabolism.

The unconscious control of respiration by reflexes was once thought to be a relatively simple matter, but as a result of experiments in respiratory physiology the accumulating evidence of the various interrelations between respiration, circulation, and the tension of gases in the blood is overwhelming. It has been indicated that the true situation is quite complex and to discuss the physiology of respiration would take a whole evening. However, I will mention briefly some of the principal reflexes which influence the character and rate of respiratory movements. The coordination of respiration is regulated by the respiratory center in the medulla. Its action is greatly influenced by outside stimuli. Decrease of the percentage of oxygen in the blood would depress the center were it not for a compensatory reflex originating in the carotid sinus and aortic arch. Chemoceptors in the carotid bodies and aortic body which are sensitive to the carbon dioxide tension in the blood also affect respiration. The Hering-Breuer reflex originating in the alveoli of the lung starts inspiration, arrests it and starts expiration as a result expansion and collapse of the alveoli. Pain, excitement, fear and rage also affect the respiratory center. Changes in the pH of the blood, fall in blood pressure, along with the changing tension of gases in the blood will affect the rate and volume of the respiratory movement.

When one is faced with the decision of selecting the agent of choice for a particular patient, many wide and varied facts must be considered. The point of prime consideration is the safety of the patient. Our desire is to produce suitable anesthesia for the surgeon, whatever the type of operation, and at the end of the operation have a patient in excellent condition who will be free of all postoperative complications.

For the average patient, in good physical condition except for the surgical problem confronting us, practically any of the common agents in use at the present time are safe providing one realizes the capabilities of the agent and does not try to force the anesthetic in order to obtain additional relaxation. In other words, for ordinary cases the approved anesthetic agents are safe, but they may be made extremely dangerous by the person administering them. We could paraphrase the old maxim and say "It's not the anesthetic but the person who administers it". If the anesthetist does not take chances, is capable of dealing with unusual occurrences, and does not venture beyond his experience, then the risks to which a patient is exposed are negligible.

One is faced, first, with the problem as to whether to use local or general. Recent advances in both general and local anesthesia have broadened the

field for their use. Our decision will be affected by the temperament of the individual and his desire for local or general. An anesthetist is subject to the charge of legal assault if he administers either against the wishes or without the consent of the patient. Surgeons usually have become accustomed to one or the other and have very definite preferences as to whether local or general is used. In some parts of the country local is used whenever possible, while in other parts of the nation the idea of general anesthesia prevails. The absence of a trained anesthetist in whom the surgeon has faith often leads him to depend on various types of local anesthesia. Carefully kept records show that, as regards post-operative complications, there is little choice between local or general anesthetics.

The real problem of the anesthetist in choice of an anesthetic presents itself when the patient is a bad risk. The patient may be suffering from acute or chronic respiratory infection, diabetes, or hypertension and myocardial disease. The elderly and very young also present a particular problem. Upon our decision in cases like these may depend the very life of the patient.

In regard to children, I firmly believe that all children except babies should receive some pre-operative medication. Psychic trauma incurred during the induction of an anesthetic can affect all future medical care of that child. The induction of an excited child is never conducive to a smooth general anesthetic. The barbituates are well tolerated by children and nembutal particularly is favored by many of our medical men. For the average child, the dosage by mouth is usually ¾ gr. for age 2-5; 1 gr. for age 6-9: and 1½ gr. for age 9-12. If given rectally the dosage is increased and may be given either as a suppository or dissolved in 15 cc. of water which is injected with a small catheter attached to a syringe. Avertin in small doses is also to be recommended. One should endeavor to have the child asleep when the time for induction arrives. As an induction agent for children, I have long had a preference for nitrous oxide. Induction is rapid and may easily be started on a sleeping child by holding the mask with the gas flowing just above the face of the patient. Thus the child never wakes up and has no fears in regard to going to sleep in the future. Other induction agents are vinethene and ethyl chloride which give satisfactory results in the hands of those who prefer them. For many short operations, the above agents are all that are necessary. For long operations, the drug of choice is ether administered by the semi-open drop method. For very young children it has been the usual practice to start them with drip ether. A supplemental supply of oxygen is given throughout the operation, and by suction the respiratory passages are kept free from mucus. Local infiltration may also be used in very young children provided the child has received sedation. The sedation may be supplemented by intramuscular injection of sodium luminal. In chest operations on children ether or cyclopropane may be used. Some children do not tolerate cyclopropane very well, but on account of its rapid action, the high concentration of oxygen and the shallow respiration, it greatly facilitates the ease of operation. All open chest cases should first be intubated.

The aged and those suffering from long general debility present a common problem. On account of their lowered resistance, a weak anesthetic can often be used satisfactorily. For many minor operations a weak solution of sodium pentothal given intravenously with an adequate supply of oxygen by catheter or mask is the ideal anesthetic. For major operations, the pentothal is supplemented by inhalation anesthesia, the nature of which depends upon the relaxation required; often a mixture of nitrous oxide 50 per cent and oxygen 50 per cent is sufficient. If not, a weak mixture of cyclopropane and oxygen or ether and oxygen is used. Pentothal alone very often depresses the respiration so much in long operations that we feel it increases the risk of post-operative pulmonary complications. The addition of a small amount of inhalation anesthesia reduces the amount of pentothal used, increases the depth of respiration, prevents the tendency of parts of the lung becoming atelectatic, and encourages a more rapid recovery from the anesthetic agent. Local infiltration or nerve blocks work well and are practically without hazard. A low spinal with a minimal dose for work on the lower extremities or around the perineum is an entirely safe procedure. Practically all our perineal prostatectomies are performed under low spinal; the drug commonly used is novocaine crystals in a dose of 75-100 mgm. Upper abdominal operation under single dose spinal is not without its hazards which may be either circulatory or respiratory. The inauguration of continuous spinal has decreased the risk and has en-

joyed extreme popularity in some parts of the country. It has always been our desire to have a patient leave the operating room with their blood pressure near their normal reading. The vasomotor system of the elderly or debilitated is not as labile as that of a younger person and they cannot compensate quickly for the fall in pressure that often occurs under a high spinal. It is necessary that these patients be watched carefully and proper restoratives be immediately started if there is a marked fall in pressure. A recent addition to our list of drugs may be used to considerable advantage in the elderly patient. I refer to intocostrin, the refined product of curare. Added in minimal doses to a very light anesthesia it gives relaxation resembling that of spinal anesthesia. The effect of intocostrin lasts for approximately 30 minutes at which time the dose may be repeated if necessary.

In hypertension and cardiovascular disease it is essential to make the choice of an agent which will not excite the patient and will not increase or materially decrease the blood pressure. Excitement during the induction of these cases should be avoided by all means. In cases of extensive myocardial damage, the agent should be of such a nature that it does not increase the irritability of the heart muscle; in these cases the use of cyclopropane should be avoided if possible. Our most frequently used agents are pentothal alone or in combination with ether and oxygen which may be given by open drip or by the rebreathing method. Whatever the agent, a careful constant check on blood pressure and the rate and rhythm of the pulse is required. Cyclopropane is used only where there is no history of fibrillation or coronary disease. If spinal is used, it should be confined to operations on the lower part of the body, for upper abdominal operations may, as a general rule, be performed more safely under general anesthesia.

In the presence of an acute respiratory infection, all operations except those of an emergency nature should be postponed until the pulmonary condition has improved. In case of an emergency, the agent of choice is local. Pentothal and cyclopropane, used separately or combined, may also be used as a general anesthetic without any deleterious effects.

For many years it was considered that the use of ether in pulmonary tuberculosis was to be avoided at all costs. For that reason local or one of the non-irritating gases were used. However, since the advent of chest surgery, it has been found that ether given by the absorption technique or by semi open drip has no more harmful effect than the other agents; and many times the surgeons say that the post-operative course is better than when other agents are used. In other words, we have come to assume that the irritation and flare-up of tuberculous lesions in the lung are a result, not of the anesthetic in use but as a consequence of the lowering of the general resistance of the patient.

In diabetes the problem has been simplified by recent advances in laboratory work and methods of control of sugar metabolism. Any agent selected, with proper pre-medication and careful post-operative treatment should be satisfactory. One should choose those least likely to disturb the metabolic activity of the patient. The agents commonly used are local, nitrous oxide, pentothal and cyclopropane.

Until recent years, all eye surgery was performed under local anesthesia. This was due to the nausea which resulted from general anesthesia. As a result of retching severe complications in the operative eye often resulted, such as loss of vitreous and detachment of the retina. Pentothal is a drug which, when used alone, very rarely causes any nausea and is being used more widely all the time in ophthalmological surgery. Oxygen by catheter is used to prevent the least amount of anoxia.

In regard to complications of anesthesia one will find that very few are encountered if proper precautions are taken to prevent them. Following are a few rules which, if followed, will enable us to avoid many disturbing experiences:

1. Suitable pre-operative medication to insure a quiet, calm patient.

2. A smooth quiet induction conducted in a confident and assuring manner.

3. Maintenance of a perfectly free airway at all times; suction to remove mucoid secretions; intubation if necessary. Intubation in all open chest work.

4. Insurance of an adequate oxygen supply at all times. One must bear in mind that some patients need more oxygen than the average, namely: Anemic patients; hyperthyroids; toxic individuals, especially those with high fever; pregnant women; and very young children.

5. Careful record of blood pressure, pulse and respiration.

6. Maintenance of pressure near the individual's

normal by means of glucose, plasma, whole blood and vaso-pressor drugs.

7. Prevent accumulation of carbon dioxide in the blood by assuring yourself that the absorber is in good working condition.

8. Use an anesthetic agent suitable for the relaxation required. Never force an anesthetic.

9. Avoid the use of adrenalin during the administration of cyclopropane. If arrhythmias appear under cyclopropane, lighten the anesthesia. If they do not disappear, introduce a small amount of ether vapor and if that is not successful it would be wise to discontinue the cyclo and employ another agent.

10. Proper precautions should be taken when using explosive anesthetics. A small amount of water should be kept in the re-breathing bag to insure a high humidity.

11. Preliminary atropine to decrease the secretions and to lessen the chance of laryngospasm.

12. Sneezing during the induction of pentothal anesthesia may be stopped or prevented by a few drops of cocaine 2 per cent in the eye which reaches the nasal passages by way of the tear ducts.

13. Preliminary barbiturates are useful in all forms of local anesthesias to prevent drug reactions.

14. Readiness at all times to institute artificial respiration if required.

15. Remove mucoid secretions from pharynx and trachea before returning patient to room.

Medical Arts Building.

Children Born with Syphilis Respond Well To Penicillin Treatment.

In a study of 61 children, two Atlanta physicians have found that penicillin is effective in the treatment of congenital syphilis.

Congenital syphilis—a term usually associated with children who are born with the disease—is transmitted to an embryo while it is still in the womb. The infected mother's blood carries the corkscrew-like spirochetes to the infant's body. Many or all of the embryonic organs are affected.

Drs. Joseph Yampolsky and Albert Heyman, who are from the Departments of Pediatrics and Medicine of Grady Memorial Hospital and Emory University School of Medicine in Atlanta, used penicillin to treat the 61 syphilitic children, according to the October 19 issue of *The Journal of the American Medical Association.*

Thirty-two of the 61 children had simple infantile congenital syphilis. Twenty-three of the 32 responded satisfactorily under the penicillin treatment. "All 23 are clinically well, have normal spinal fluids and exhibit no clinical evidence of the disease," the authors say.

While three of the patients died, the authors believe that the fatalities were in no way related to the treatment. Two of the deaths "apparently resulted from an overwhelming syphilitic infection in premature and malnourished infants, while the third fatality remains unexplained."

In discussing the remaining 29 patients, the Atlanta doctors say that seven were suffering from acquired primary and secondary syphilis, while the others were treated for late forms of congenital syphilis.

In the seven cases of acquired syphilis, the doctors say the patients were treated with doses of penicillin comparable to those used in adults. "The syphilitic lesions healed promptly in every case and the spirochetes disappeared rapidly," *The Journal* article says, adding: "All of these children have been followed for at least six months.

"The results obtained with penicillin in the treatment of syphilis in children seem to depend on the nature and duration of the disease. Although penicillin appears to be effective in the treatment of infantile congenital syphilis and in early neurosyphilis, little or no response can be expected in the treatment of the late manifestations of this disease."

Drs. Yampolsky and Heyman say that while the optimum dosage of penicillin cannot be determined in such a small series of cases, "we believe that a total dose of penicillin of 100,000 units per kilogram of body weight is effective in the treatment of the majority of these cases."

THE TREATMENT OF VINCENT'S ANGINA WITH PENICILLIN†

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I. Introduction: The purpose of this paper is to compare the therapeutic value of various types of treatment for Vincent's angina (Vincent's infection of the tonsils) with particular regard to obtaining a satisfactory method for the treatment of ambulatory patients. The chief point stressed is the length of time required to affect a symptomatic and clinical cure. In view of its doubtful or extremely low communicability Vincent's angina may be treated on an outpatient basis. Relatively few individuals with other forms of Vincent's infection, such as stomatitis and gingivitis, are hospitalized but are treated entirely as outpatients in the various dental clinics.

None of the drugs used in the past have been uniformly satisfactory. These drugs include chromic acid, nascent oxygen-liberators, such as sodium perborate and hydrogen peroxide, and the arsenicals. Adjuvant therapy has included the oral administration of nicotinic acid.

The use of sulfonamides provided a marked improvement in the therapy of this disease. The chief disadvantage of the sulfonamides is their toxicity. When sulfonamides are employed, the transition from Vincent's angina to agranulocytic angina may be insidious and is always a potential hazard. The detection of this malignant change requires repeated blood counts. An additional disadvantage is the possibility of inducing a sulfonamide sensitization which would preclude the use of sulfonamides in the treatment of future illnesses of a more serious nature.

Penicillin with its apparent lack of significant toxicity appears to fulfill the necessary prerequisites of providing a safe, effective drug for the ambulatory treatment of Vincent's angina for both military and civilian patients.

II. Clinical Material: A total of 42 hospitalized patients were studied with particular reference to the rapidity with which therapeutic results were obtained by the use of various methods of treatment (see Table I).

Fourteen patients were treated with penicillin pastilles compounded in the hospital pharmacy, ten patients with arsenicals, nine patients with sulfonamides and nine patients with penicillin lozenges.‡

The therapeutic regimen employed for each of the several drugs mentioned was as follows:

(1) Penicillin pastille therapy: The patients were given penicillin pastilles with instructions to keep a pastille in his mouth continuously from 9:00 A. M. to 9:00 P. M. (usually requiring 24 pastilles daily). They were not allowed to use any gargles or mouth wash. Each pastille lasted approximately ½ hour. A half day's supply of pastilles was kept on the bedside table and replenished as needed. Unused pastilles were stored in the ward refrigerator. The formula for the pastilles is as follows:

Syrup	60.
Dist. Water	60.
Gelatin	28.
Sodium Penicillin	200,000 units

This amount made 100 pastilles, so that each pastille contained 2,000 units of sodium penicillin. An average of two days' treatment was required to affect a cure.

(2) Arsenical therapy: The patients were given 2 intravenous injections of either mapharsen or neoarsphenamine on alternate days. The initial dose of either drug was gm. 0.04 and the following dose was gm. 0.06.

Intravenous therapy was frequently combined with local arsenical therapy in which a 5 per cent neoarsphenamine-glycerine suspension was applied to the affected area twice daily. Some of the patients were treated with local arsenical therapy only. Three to fourteen days of local treatment were required in addition to the intravenous arsenical therapy.

(3) Sulfonamide therapy: The patients were given gm. 0.5 of either sulfadiazine or sulfathiazole every 2 hours to be dissolved on the tongue from 9:00 A. M. to 9:00 P. M. At 9:00 P. M. they were

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‡Supplied by Department of Medical Research, Winthrop Chemical Company.

TABLE I

Case	Age	Race	Location of Lesion	Severity of Infection	Pre-Treatment Smear	Treatment	Symptomatic Improvement	Clinical Recovery	Total Days Hospitalized	Post-Treatment Smear
1	35	W	right tonsil	severe	+	Mapharsen I.V.	1 day	5 days	9 days	Not done
2	24	W	right tonsil	moderate	+	Neoarsphen I.V.	2 days	8 days	10 days	Not done
3	19	W	right and left tonsil	moderate	+	Neoarsphen	2 days	5 days	6 days	Not done
4	24	W	left tonsil	moderate	+	Neoarsphen I.V.	7 days	7 days	15 days	Not done
5	32	W	left tonsil	moderate	+	Mapharsen I.V.	2 days	3 days	5 days	Not done
6	27	W	right and left tonsil	moderate	+	Mapharsen I.V.	6 days	6 days	9 days	Not done
7	30	W	left tonsil	moderate	+	Mapharsen I.V.	3 days	4 days	5 days	Not done
8	25	W	left tonsil	severe	+	Mapharsen I.V. Local application 5% neoarsphenamine in glycerin	6 days	14 days	15 days	Not done
9	26	W	tonsils bilateral	severe	Neg.	5% neoarsphen in glycerin locally	2 days	4 days	5 days	Not done
10	20	W	left tonsil	severe	+	5% neoarsphen in glycerin locally	3 days	4 days	5 days	Not done
11	26	W	tonsils bilateral	severe	+	Sulfadiazine	3 days	5 days	11 days	Not done
12	30	W	tonsils bilateral	severe	+	Sulfadiazine	3 days	6 days	7 days	Not done
13	20	W	left tonsil	severe	+	Sulfathiazole	2 days	3 days	6 days	Not done
14	25	W	left tonsil	severe	+	Sulfathiazole	2 days	3 days	6 days	Not done

15	21	W	tonsils bilateral	moderate	+	Sulfathiazole	2 days	3 days	5 days	Not done
16	20	W	tonsil right	moderate	+	Sulfathiazole	2 days	5 days	6 days	Not done
17	33	W	tonsil left	severe	+	Sulfathiazole	2 days	3 days	5 days	Not done
18	26	W	tonsil right	moderate	+	Sulfathiazole	2 days	4 days	6 days	Not done
19	21	W	tonsils bilateral	severe	+	Sulfathiazole	3 days	4 days	4 days	Not done
20	23	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	3 days	Not done
21	23	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	4 days	Not done
22	37	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	4 days	Not done
23	29	W	tonsil right	moderate	+	Penicillin Pastilles	1 day	4 days	5 days	Not done
24	22	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	3 days	Negative
25	35	W	tonsils bilateral	moderate	+	Penicillin Pastilles	1 day	2 days	4 days	Negative 2nd day
26	25	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	3 days	4 days	Negative 2nd day
27	27	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	4 days	Negative 2nd day
28	23	W	tonsil left	moderate	+	Penicillin Pastilles	Less than 24 hours	1 day	3 days	Negative 2nd day
29	20	W	tonsil right	moderate	+	Penicillin Pastilles	12 hours	2 days	5 days	Negative 2nd day
30	25	W	tonsil right	moderate	+	Penicillin Pastilles	12 hours	2 days	7 days	Negative 2nd day

TABLE I—CONTINUED

Case	Age	Race	Location of Lesion	Severity of Infection	Pre-Treatment Smear	Treatment	Symptomatic Improvement	Clinical Recovery	Total Days Hospitalized	Post-Treatment Smear
31	20	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	4 days	Negative 2nd day
32	37	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	3 days	4 days	Negative 2nd day
33	33	W	tonsil right	mild	+	Penicillin Pastilles	1 day	2 days	3 days	Negative 2nd day
34	29	W	tonsil left	moderate	+	Penicillin Lozenges	1 day	2 days	4 days	Negative 2nd day
35	42	W	tonsil left	moderate	+	Penicillin Lozenges	1 day	2 days	3 days	Negative 2nd day
36	26	W	tonsil left	moderate	+	Penicillin Lozenges	12 days	2 days	4 days	Negative 2nd day
37	25	W	tonsil right	moderate	+	Penicillin Lozenges	24 hours	2 days	4 days	Negative 4 hrs. 6 hrs. 8 hrs.
38	19	W	tonsil left	mild	+	Penicillin Lozenges	1 day	2 days	5 days	Negative 24 hours
39	30	W	tonsil right	moderate	+	Penicillin Lozenges	1 day	2 days	5 days	Negative 3 days
40	25	W	tonsil right	moderate	+	Penicillin Lozenges	2 days	2 days	5 days	Negative 36 hours
41	24	W	tonsil right	severe	+	Penicillin Lozenges	1 day	3 days	5 days	Negative 22 hours
42	23	W	tonsil right	severe	+	Penicillin Lozenges	12 hours	4 days	5 days	Negative 4th day

given an oral dose of gm. 4 to be swallowed and no further medication was given during the night. The course of therapy was reinstituted the following day. Sodium bicarbonate in the dose of gm. 4 q.i.d. was given concurrently to achieve alkalinization. No mouth wash or gargles were used. Two to three days' treatment was required to affect a cure.

(4) Penicillin lozenges therapy: The same regimen was followed as for penicillin pastilles. Each lozenge lasted approximately ½ to ¾ hour before completely dissolving in the mouth. A lozenge contained 1,000 units of calcium penicillin. An average of two days of treatment was required.

The results are listed in Table I. The following terms are defined:

A. Symptomatic cure: The relief of symptoms sufficient to enable the patient to return to full duty status.

B. Clinical cure: Practically complete subsidence of signs of inflammation and necrosis. The residual membrane which could easily be removed from the tonsil did not reform. The tonsillar smear was negative.

C. Total hospitalization: The discrepancy in the number of days shown in the columns "Symptomatic Improvement" (Table I) and "Total Days Hospitalized" is significant. This interval represents time consumed with administrative details, including admission and disposition, and would not occur if the patients had been treated as out-patients.

III. Conclusions: (1) Penicillin pastilles or lozenges produce symptomatic relief in 12-48 hours in patients with Vincent's angina.

(2) Twenty-three patients with Vincent's angina were treated with penicillin in the form of pastilles or lozenges without a relapse.

(3) The results obtained in this study indicate that penicillin in the form of lozenges is a drug well suited to the ambulatory treatment of Vincent's angina.

Allergy Drug Presents Serious Industrial Hazard—Drowsiness.

Two Rochester, N. Y., doctors warn that benadryl, a very effective drug for allergic skin diseases, is dangerous to persons operating any kind of machine, especially an automobile, because it may produce drowsiness, according to an article in the September 28 issue of *The Journal of the American Medical Association.*

Benjamin J. Slater, Associate Medical Director, Eastman Kodak Co., and Nathan Francis, of the Medical Department of the Eastman Kodak Co., in Rochester, state that "because of this narcotic side reaction incident to the taking of benadryl, the drug may be a serious hazard when used by persons operating automobiles or in industry operating moving equipment or machinery."

In their series of 65 cases, the authors point out that drowsiness was a common symptom in 25. "This figure should be increased somewhat," they say, "as many of our patients were instructed to take the drug only at bedtime. Invariably they reported that they slept better than usual. Drowsiness may occur from one to three hours after taking benadryl, and this drowsiness may be cumulative if the drug is continued."

A case report of one of their patients serves to illustrate how dangerous the effect of the drug may prove. A 20 year old man was given a 50 milligram capsule of this drug to relieve severe symptoms of hay fever. The second day of treatment he took the capsule just before going to work. He complained of feeling drowsy. An hour later, while driving an electric platform cargo truck, he lost control of the truck and it fell off the platform. Fortunately, he jumped in time to avoid injury.

TRAUMATIC PERFORATION OF THE EAR DRUMS*

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During the past few years those physicians who have been in the Armed Forces have had the opportunity of observing many men with rupture of the ear drums, under varied circumstances and conditions. It is my intention to present some of the observations made of this type of injury in hopes that they may be of some interest and value in civil practice. The remarks are confined to a group of fifty-odd individuals, consecutively seen, suffering injuries to the membrana tympani, secondary to the effects of exposure to high explosives, e. g., shell, bomb, and mine blast. The injuries were sustained during the winter months of December, January, and February, 1944 and 1945, on the continent, and first came under my observation from approximately forty-eight hours to ten days after injury, depending upon the existing evacuation policy at the time. They were kept under observation for approximately thirty to forty days. Many of the individuals had suffered other traumatic injuries, and nearly all had experienced some degree of cerebral concussion.

MATERIAL. Although many more injuries to the ear drums were seen, records have been kept on fifty-eight patients. The right drum was perforated in forty-three and the left in forty-four. Twenty-nine had bilateral injuries, giving a total of eighty-seven injured membranes. The large majority of the patients were in the Ground Forces.

SIGNS AND SYMPTOMS. The drum membrane in its lower segment was invariably the part that suffered. The perforations varied from small, radial, slit-like or oval tears to large, ragged defects involving two-thirds of the membrane. It could not be determined with any degree of accuracy whether the tear was sustained during the positive or negative phase of the blast. Multiple perforations were noted in three or four cases. Hemorrhage was minimal. Actual hemorrhage into the middle ear was rarely seen. A few small clots of blood were usually present in the canal or on the drum, adjacent to the perforation. Some of the men gave a history of having slight bleeding from the canal immediately after the injury. If infection had intervened, then exudate was noted in the canal.

Pain was never a major complaint at the time of the injury or afterwards. In fact, no history of pain at the time of the injury could ever be obtained, which may be explained in part by the concurrent cerebral concussion. It was difficult to dissociate the ear symptoms from those attributed to cerebral concussion. Vertigo, like pain, was never a prominent symptom or sign. Deafness, tinnitus, and a sensation of fullness in the head were most troublesome and invariably present. Tinnitus was the most persistent and troublesome of all the complaints, with the exception of deafness. Acoustic hyperaesthesia was sometimes present late in the recovery period. Disorganization of the ossicular chain was noted in a few severely injured cases.

COMPLICATIONS. Deafness was, of course, the most common complication. No audiometer was available. Hearing was determined by the whispered voice test, as prescribed by the Army, and by tuning forks. The deafness was predominantly of the conductive type, and was apparently due to damage by air pressure rather than by noise. Mixed or combination cases were seen, however, and a few definitely had acoustic trauma with perceptive deafness. Except in the extreme cases, no relation could be determined between the size of the perforation and the degree of deafness. The presence of infection decreased the hearing acuity, as expected.

SUPPURATIVE OTITIS MEDIA. In considering infection of the middle ear, several factors had to be evaluated. For instance, in the majority of those having other wounds, sulfadiazine or/and penicillin therapy had been initiated shortly after the injury. This undoubtedly prevented infection in some cases. In other instances drops were instilled in the ears and the ears were irrigated prior to examination by an otologist. This in turn was responsible for some middle ear infections. In the group there was a total of 26 ears developing a suppurative otitis media. Culture disclosed the usual flora of bacteria, mainly the hemolytic and non-hemolytic varieties of staphylococci and streptococci. Treatment consisted of daily cleansing of the ear, using

*Read before the Virginia Society of Ophthalmology and Oto-Laryngology at Roanoke, May 4, 1946.

spot suction, followed by the instillation of sulfathiazole powder, plus the administration of sulfadiazine and/or penicillin orally and intramuscularly. The infection very promptly cleared up in all but two of the cases.

COMMENT. Of the fifty-eight patients under observation, all but six were ready for some type of duty after about thirty days of treatment. Twenty-seven were able to return to full duty, meaning that hearing had returned to normal or near normal, that the perforations had healed, and infection, if present, had cleared up. Twenty-four cases were recommended for limited assignment, either because of the persistence of a perforation after thirty days or because the hearing had not returned to the degree to fulfill the requirements for full duty, according to Army regulations. Of this latter group, fifteen had unilateral perforations, seven bilateral perforations, and two had defective hearing to a degree that precluded full service. Two patients were evacuated to rear hospitals because of severe deafness which was of the perceptive, acoustic trauma type. These were not able to qualify for any type of duty. Five cases were evacuated on account of suppurative otitis media which had not responded to any type of non-surgical therapy. It was felt that surgery should be considered in these cases, and the time limit did not permit such being done in the hospital in which they were under observation. Tinnitus, which was nearly 100 per cent present, improved greatly in the majority of cases, but still troubled some of the patients to a minor degree at the time of disposition. No patient was evacuated to a more remote echelon because of tinnitus.

As to the number of permanent perforations that will result in this group, it is impossible to say, because at the time of return to limited assignment it was felt that there was still likelihood that some of the perforations would eventually heal. Twenty-nine persistent perforations in twenty-two patients were still present after the observation period. These were in the membranes which had sustained the more extensive injuries. Cauterization with silver nitrate, to stimulate the edges of the perforations, was tried in some of the cases with indifferent success. Cargile membranes were not used. It was interesting to note that in two patients who had perforations which had reached a static phase, the perforations healed completely after the development of a secondary suppurative otitis media. The infection was the stimulating factor needed to obtain complete closure of the drum.

From observations of patients not in this group, those soldiers who had had suppurative otitis media as a complication of blast perforation, with recovery, were prone to have recurrence of the otitis media under unfavorable conditions such as adverse climate, severe coryza, etc.

SUMMARY. Fifty-eight service men, who had received perforations of the ear drums from the blast action of high explosives, were observed in a General Army Hospital. Within a period of thirty to forty days, twenty-five recovered to the degree that they could be returned to full military duty, and twenty-six to a limited assignment. It was necessary to evacuate seven to a rear echelon hospital for further treatment and disposition.

104 East Market Street.

Preservation of Corneal Tissue.

Corneal tissue cannot be preserved longer than three days before transplantation a Cleveland physician has found after experimenting with six different preservative mediums, according to the current issue of the *Archives of Ophthalmology,* published by the American Medical Association.

The author—Charles I. Thomas, M.D., from the Department of Surgery, Division of Ophthalmology, Western Reserve University School of Medicine—used the eyes of rabbits for his experiment.

"Corneal tissue will remain clear and of normal thickness and can be used suitably for transplantation up to a period of three days," he states. "Thereafter the tissue becomes progressively hazy and thickened, being thus rendered unsuitable for grafting."

In order to obtain the best operative results in corneal transplantation, the author maintains that the material should be fresh and used shortly after it is removed from the donor. The Eye Bank for Sight Restoration, since its organization, has facilitated this rapid distribution.

POLIOMYELITIS

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This paper is based on a study of 231 outbreaks of poliomyelitis as reported in *Public Health Reports* for the years 1927 to 1940, inclusive. These outbreaks occurred in forty-four states and were reported to the Surgeon-General of the U. S. Public Health Service by the health officers of these states. Prior to 1927 the reports were recorded in such a manner as to make impossible a statistical study such as this. The data for this paper were compiled in 1941, since which time the reports for five additional years have been recorded in the *Public Health Reports.* A detailed study of these has not been made but a casual review shows nothing at variance with the findings of this fourteen year study.

Only those outbreaks attaining a height of ten cases per week are here considered. There were many more of a minor nature but these were more difficult to follow in the recorded statistics and were ignored. Three states and the District of Columbia did not show outbreaks attaining a height of ten cases per week during the fourteen years here studied. One state made no reports to the Surgeon-General.

This paper is concerned principally with the chronology of these outbreaks as related to their geographic location in the United States. The nation-wide distribution of the disease needs no comment and its incidence in the different states is a matter of record.

A figure of ten cases per week means a higher rate in the more sparsely settled states, but that height having been reached the chronology is comparable.

In this study outbreaks were considered to have begun only when they had attained a height of ten cases per week and to have ended when the last week of ten cases had been reported in the waning of the disease. The actual beginnings and endings ante-dated and post-dated these arbitrary dates by several weeks only in all but a minimum of cases.

Of the 231 outbreaks, 58 attained a height of ten cases or more for only one or two weeks. These are of value chiefly as showing peaks of incidence. The remainder, 173, continued at or above this figure for from three to thirty weeks.

Before considering the outbreaks in detail, a brief summary of the figures upon which they are based and the general seasonal incidence of the disease during the fourteen years, is given. There were 34,944 weekly reports made in this period and the total number of cases of poliomyelitis recorded was 100,720. The greatest number of cases reported in any one year was 15,438 in 1931. The smallest annual record of cases was 1,710 in 1938.

89 per cent of these cases were reported in the last six months of the years—July to December, inclusive;
11 per cent were recorded in the first six months;
69 per cent were recorded in the months of August, September, and October;
3.3 per cent in the months of February, March and April;
24 per cent were recorded in the month of September;
0.9 per cent in the month of April.

Other facts gleaned in this study tended to maintain the known seasonal characteristics of the disease. There were a total of 2,074 weeks of ten or more cases, thus making the average duration of the 231 outbreaks almost nine weeks at a level of ten or more cases per week. Eighty-three weeks of ten cases were in the period January 1st to June 30th. All others, 1,991, were recorded between July 1st and December 31st. Of the eighty-three weeks in the first half of the year, seventy-seven were in the southern states and in California and Washington. Six only were in northern states other than Washington—New York, Oregon, Illinois and Wisconsin.

The latest week of ten cases reported in any declining epidemic was that of March 10 in a California outbreak which had persisted at this or a higher figure from the preceding year. This was the only week of ten cases reported in any March during the fourteen years. Likewise, the only week of ten cases in any *April* was the first such week in a beginning outbreak in this same state in another year. The warmest month of the year in all sections of the United States, July, proved to be fifth in the number of cases recorded during the fourteen years, having been exceeded by August, September, October and, to a slight degree, even by November.

Of the recorded outbreaks, fifty-four were in fourteen "Southern" states or states along the southern

border. The remainder (177) were in northern states—those entirely or largely north of the 38th parallel of latitude.

The peaks of incidence in southern states occurred in all months from June to November; in northern states from August to November, with one exception to be noted later. Sixteen, or nearly one-third of the outbreaks in southern states, showed peaks of incidence in June or July—California, North Carolina and South Carolina in June; Virginia, Kentucky, Tennessee, Georgia, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and New Mexico in July.

Of the outbreaks in northern states (177) only one presented a high point prior to August. This was in the state of Washington in 1940. The peak here was in June. Including this Washington outbreak there were only five in northern states with peaks of incidence prior to August 15th. All others were later, for the most part in September. Of interest is this early outbreak in the northern state of Washington. Reference to the U. S. Weather Bureau's climatologic data for this state for 1940 shows that the mean temperature for the months of March, April and May in the town of Ephrata, near the center of the state, was slightly higher than the mean temperature in Charlotte, North Carolina, for the same months. This would place the state of Washington among the southern states climatologically, at least for the year 1940.

The latest peak of incidence recorded was in the early half of November in Oklahoma in 1936.

Of the beginnings of these outbreaks, California alone showed a week of ten cases as early as the last week of April. North Carolina, South Carolina and Washington (state) had outbreaks beginning in May. Virginia, Mississippi, Louisiana and New York in June. All others began subsequent to July 1st. The only one of the 177 outbreaks in northern states other than Washington, showing a beginning as early as June was the epidemic in New York State in 1931 when a first week of ten cases was reported for the week ending June 22nd of that year.

As before stated, the actual beginning of outbreaks ante-dated by only a few weeks the time at which a height of ten cases per week was attained. This was so in the very great majority of cases. There were, however, several interesting exceptions. One was an outbreak in South Carolina that began in the fall of 1938 and continued throughout the winter at a level below ten cases per week. Beginning with the week ending May 6, 1939, there was a sharp rise in cases to ten or more per week, at which level the outbreak continued until October. A high point of thirty cases was reached in the week ending June 24. A like condition was noted in Arkansas, Oklahoma and Texas in the fall of 1936, with a very low incidence during the winter and spring. Sharp outbreaks appeared in June, 1937, and lasted into November. It is probable that these three actually comprised one outbreak in contiguous territory, although the record does not so state. Here the disease was apparent throughout the winter and early spring. Usually it is not evident in February, March and April. These four instances are all in southern areas; none were noted in northern states.

Of the termination of these outbreaks, it was found that forty-nine of the fifty-four in southern states had declined to a point below ten cases per week prior to November 1st. Of the entire 231, only 25 maintained a height of ten cases later than November 30th. Of these twenty-five, only seven showed as many as ten cases per week later than December 31st. Three of the seven were California outbreaks which carried sixteen ten-case weeks into January, February and March (one only into March). The other four, in the states of New York, Illinois, Oregon and Wisconsin, carried four weeks of ten cases into January and one (New York) into February.

That poliomyelitis is in large measure a disease of warm weather has been obvious for many years. This study brings out an even closer relation between the disease and seasonal temperatures than may have been generally recognized. Here it is seen that an interval of from six to eight weeks separates the beginnings of outbreaks in states of the south, or the warmer states, and those of the north. Specifically, it has been here shown that outbreaks began in southern and border states and in the state of Washington as follows: California the last week in April; North Carolina, South Carolina and Washington the second week of May; Virginia, Mississippi and Louisiana in early June. It is also here shown that New York alone of the populous states of the northeast and middle-west reported a week of ten cases earlier than July 1st (June 22, 1931). Otherwise none of the 177

outbreaks of poliomyelitis in northern states attained a height of ten cases per week until some time in July. This early start of poliomyelitis in warmer areas is reflected in the earlier peaks of incidence in outbreaks. In thirteen southern states and the state of Washington there were sixteen outbreaks which showed high points in the disease in the months of June and July in the fourteen years here considered. No state north of parallel 38, except Washington, presented a peak of incidence in these months—and only four in the first half of August.

Apparently, poliomyelitis can begin in any of the warmer states at any time from late April on, while in the northern states with their somewhat "later season" the disease seems unable to make a beginning until, at the earliest, late June.

There is, in this six to eight weeks' difference, a striking resemblance to conditions found to prevail in yellow fever as relates to the beginnings of that disease in areas south of and north of the 38° parallel of latitude. As yellow fever has not appeared in the United States since 1905, there are no recorded statistics of epidemics of that disease to compare with those of poliomyelitis as set forth in this paper. However, the U. S. Quarantine Regulations which prescribe the treatment of vessels arriving in the United States from foreign ports infected with yellow fever very definitely set forth this difference in time of infectibility as between southern and northern areas. To quote from these regulations as to the detention of vessels: "Quarantine detention is imposed upon vessels arriving at United States ports from ports infected, or suspected of infection with yellow fever, as follows": First, "arriving at a port south of the southern boundary of Virginia in the season of active quarantine, *April 1st* to November 1st." Second, "arriving at ports north of this line and south of the southern boundary of Maryland (38th parallel of latitude) between *May 15th* and October 1st." Here is recognized a difference of six weeks—April 1st to May 15th between Virginia and points south of that state to the Gulf of Mexico as to possible early infection.

Yellow fever not having been present in the United States north of the southern boundary of Maryland during the past century, it was not necessary in writing the Quarantine Regulations to consider a later period of quarantine detention in states north of Virginia. Had it been, this detention period would probably have begun June 1st. This six or eight weeks' difference in time of possible early infection with yellow fever as between northern and southern areas of the United States is duplicated in poliomyelitis. In yellow fever, the determining factor is the time of development of the transmitting mosquito—earlier the farther south or warmer the area. The reason for the earlier development of poliomyelitis in the warmer states is not clear at this time. Insect transmission is strongly intimated and this intimation is enhanced by the outbreak in the state of Washington in 1940. Just here it may be noted that the mean annual temperature in Fresno, California, near the center of that state, corresponds closely to that of Birmingham, Alabama. More southerly areas of California would correspond in mean annual temperatures to areas along the Gulf of Mexico. It was in California that the earliest week of ten cases in a beginning outbreak of poliomyelitis was noted—the week of April 25th. The actual start of this outbreak was no doubt about April 1st, which is the earliest period set by the U. S. Quarantine Regulations for the possible start of an epidemic of yellow fever in the far south—the earliest period for the possible appearance in dangerous numbers of the insect vector of that disease. If there is any factor other than insect transmission involved in the progression of diseases from south to north in accordance with the progressive advance of the warm weather of spring and early summer it has not been observed. In the so-called contagious diseases and in those due to foods directly infected by man this factor is unknown. That *high* temperature alone is not the determining factor should be obvious when it is seen that November exceeds July in number of cases of poliomyelitis recorded over this period here studied.

The striking similarity seen in the beginning of epidemics of yellow fever and poliomyelitis is definitely absent when the termination of these diseases is considered. Yellow fever cannot continue to develop anywhere in the United States after November 1st, as the transmitting mosquito has then disappeared, at least to an "innocuous minimum". But twenty-five of the 231 outbreaks of poliomyelitis continued into December at or slightly above a level of ten cases per week and four of these in four *northern* states showed a total of five weeks of ten cases in January and February (one week in February).

To a lesser and continuously decreasing degree poliomyelitis persisted throughout the winter and early spring. The bridge upon which the disease crossed from one season to another was a very narrow one when less than two cases per month per state were recorded in the months of February, March and April in this period of fourteen years.

These recorded winter cases, together with some peaks of incidence of the disease in November, seem definitely to rule out a summer insect as a direct factor in the termination of outbreaks of poliomyelitis, however strong may be the suggestion of such an insect in their origins.

A complete understanding of the factors that make possible the similarities and differences in yellow fever and poliomyelitis as regards the beginning and termination of outbreaks would lead undoubtedly to an untangling of the intricate epidemiologic web presented by the latter disease.

In a problem so complicated and so fraught with dire results due to delay in its solution, one should be pardoned for venturing to suggest a possible line of study based upon the chronological findings set forth above.

The impressions left upon the mind of the writer are: that the virus of poliomyelitis must, primarily, be resident in some animal that is associated with man, preferably one which furnishes some article of food; that in this animal the virus must be harmless or relatively so; that the virus is transmitted from animal to animal by the bite of an insect; that outbreaks of poliomyelitis in man are overflows of the infection from animals, as human plague is an overflow from primarily infected rats, and that man contracts poliomyelitis through the use of the animal or its products as food. Such a double transfer of disease is seen in tularemia and could be seen also in brucellosis were this disease transmitted in cattle —as well it might be—by the bites of flies.

Enlarging somewhat upon this suggestion, it may be that the insect here predicated develops earlier, as does the mosquito,: in the warmer areas of the United States and that it is active in the same period as the mosquito. Upon the beginning disappearance of the insect in the fall, there would be a decline in new human cases corresponding to a disappearing infestation in the animal involved. This decline would continue until there remained in early winter only those cases which resulted from the use of food from the more chronic cases of animal infestation. The few winter cases would be related to the few animals that could then be classed as carriers. These carriers would serve also as vehicles for transferring the virus of poliomyelitis to another season and to a new, nearby, non-immune animal area (an adjoining state, perhaps).

A study of the fluids and tissues of animals furnishing food to man in any area where poliomyelitis may be approaching epidemic proportions would seem definitely in order. A study of such insects as might feed upon these animals might also be made, as is done in the case of the flea in bubonic plague. The matter of gathering and pooling such material for use in laboratory animals susceptible to poliomyelitis should not be beyond the scope of those who devote themselves to the study of this disease.

Question Usefulness of Quarantine.

Usefulness of quarantines established by some states to prevent the spread of poliomyelitis is held "highly questionable" by *The Journal of the American Medical Association.* In the July 27 issue, *The Journal* says in an editorial.

"This year, as in previous years, some sections of the country have developed an exceptionally high incidence of poliomyelitis. A few cities in southern Florida were involved in this manner. One of the neighboring states considered the establishment of a quarantine against Florida residents. Georgia actually imposed such a quarantine against all persons coming from the former state, even including Pensacola, which is 402 miles from the nearest city in which there has been an outbreak of poliomyelitis that could possibly be considered as epidemic in nature. The usefulness of this interstate quarantine is highly questionable. The overwhelming concensus of authorities in epidemiology and public health is that such interstate quarantine does not serve any useful purpose in preventing the spread of poliomyelitis. In the absence of more specific knowledge on the methods of spread of the poliomyelitis virus than is now available, state quarantine can only be considered reminiscent of the old practice of shot-gun quarantine against yellow fever before learning the role of the yellow fever bearing mosquito."

CRITICAL REVIEW OF FIFTY CASES OF URTICARIA

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The last comprehensive studies of urticaria and angio-neurotic edema were published eleven years ago. Stokes, Kulcher and Pillsbury[1] reviewed in 1935 the literature on urticaria and reported 100 cases. Fink and Gay[2] based their studies, which they published in 1934, on 170 cases.

A considerable number of papers for the past 10 years dealt with new therapeutic approaches of urticaria or tried to bring out the respective author's belief that, based on the successful treatment of a number of patients, one particular etiologic factor was of decisive importance. This study of 50 cases of urticaria was mostly made with the intention to determine to what extent the therapy of urticaria can be successful if the known etiologic investigations and therapeutic measures are utilized.

Twenty of the cases were treated at the clinic and thirty were private patients.* All patients were seen within the past six years and most of them were followed up to date.

CLINICAL DATA

Sex: There was a preponderance of female patients, 30 females and 20 males. Such a ratio of 3 to 2 has been commonly observed in almost all publications. From the statistics of the 500 cases, which Urbach[3] reported, it can be concluded that the females make up this majority in the 3rd, 4th and 5th decades (5:3 ratio) while the males are preponderant in the 1st decade. The 2nd and 6th decades are almost evenly divided as to sex. If the etiologic factors are consulted for an explanation of the preponderance of urticaria in female patients, it can be said that two factors, namely, the endocrine and psychogenic, could account for this phenomenon, since they are more frequently encountered in this sex.

Ages: The ages varied from 3 to 59 years. The greatest number of patients was in the 3rd and 4th decades. These 2 decades comprised half of the patients. Urbach found in his greater number of cases that 7/12 of the patients belonged to these two decades.

*The cases were from the Clinic of the Medical College of Virginia and the practice of Dr. Wyndham B. Blanton.

Ages of patients at onset of treatment:	0–10	Years	5 Patients
	10–20	"	8 "
	20–30	"	12 "
	30–40	"	13 "
	40–50	"	9 "
	50–60	"	3 "

If the ages are considered in which the first attacks of urticaria appeared, only the numbers in the first two and last two decades are changed. The increase in the first two equals to decrease in the last two decades.

Ages at onset of first symptoms:	0–10	Years	8 Patients
	10–20	"	9 "
	20–30	"	14 "
	30–40	"	12 "
	40–50	"	6 "
	50–60	"	1 "

Duration: The duration of the urticaria until the patients came under observation varied from 2 days to 6 years. The majority of the patients (41) had the chronic type with a duration of symptoms for more than 2 months. Thirteen patients reported previous attacks. The comparatively small number of acute cases is obviously due to the fact that patients with transient and acute attacks of urticaria do not always seek medical advice and only rarely consult an allergy clinic or an allergist.

Season: As far as the seasonal distribution is concerned, the greatest number of exacerbations and onsets of symptoms were reported in the summer. Twelve patients stated that they did not notice any seasonal influence. Sixteen patients gave the summer as the time in which their symptoms were at first observed or an aggravation of a chronic condition was noticed, 5 gave the fall, 11 the winter and 6 the spring. Fink and Gay found that the peak of onsets in their cases was in January, which they interpreted to be a result of the larger number of respiratory infections at that time of the year. Among our series of cases infections were not as commonly found as an etiologic factor as in Fink and Gay's series, which would explain the difference in the seasonal distribution.

Symptomatology: The symptoms exhibited by the patients were of the usual character. The lesions consisted of wheals in 39 patients, giant urticaria

in 9 and the papular type in 2. Seven patients had in addition to wheals giant urticaria.

Thirty-two patients had generalized urticaria, 8 of whom noticed at first a localization of the wheals mostly in the areas of pressure. Eighteen patients had localized urticaria (face, extremities, neck).

The mucous membranes of the mouth were involved in 3 patients. Baird[4] pointed out that typical urticarial wheals have been demonstrated in the stomach by gastroscopic examination. It can, therefore, be assumed that the gastric or intestinal mucosa was involved in many of the 15 patients who gave a history of gastrointestinal symptoms which preceded their hives. These symptoms consisted of "heavy or burning feeling in the stomach", "heartburn", vomiting and diarrhea.

Laboratory findings are at times helpful in determining the etiologic factor. In none of our cases was any appreciable help for the etiology obtained from laboratory examinations. Winkenwerder[5] has observed that eosinophilia is not frequently found in urticaria. Only a relatively small number of our cases showed an eosinophilia. Blood counts were made on 31 patients and only 9 had an eosinophile count of 4 per cent or more (6 had 4 per cent, 1:6 per cent, 1:7 per cent and 1:10 per cent).

Prothrombin time was determined on 6 patients; it was prolonged only in one.

Determination of sedimentation rate was not useful as an indication of the existence of a focal infection which would be a causative factor. Only 1 out of 8 patients had a fast sedimentation rate, but no focus of infection could be found in this patient and a dietary regime resulted in a cure of the urticaria. On the other hand, 2 patients with a normal sedimentation rate did not improve until a focal infection was eliminated.

Gastric analyses were made on 6 patients; 4 gave normal findings, 1 showed a hypoacidity and 1 an anacidity. Lowered acidity and especially anacidity have repeatedly been mentioned as a predisposing factor of urticaria.

Skin Tests: Most observers agree upon the experience that skin tests are of less value in urticaria than in other allergic conditions. Baird characterizes the unreliability of skin tests by using Ormsby's statement: "Skin tests in urticaria are often positive to substances that are innocent and negative to substances that are causal." Several explanations of this observation have been suggested. The most frequently encountered explanation is that the active antigen is a split product of digestion, which we are unable to demonstrate by using the original substances in our tests. Sulzberger[6] discusses the pros and cons of this and the other theories which were offered in an attempt to explain the misleading character of the skin tests in urticaria.

Although they have seen disappointing results from skin tests, a number of authors (G. T. Brown,[7] Feinberg,[8] Vaughan,[9] Kahn,[10] Johnson[11]) have advocated this procedure as a valuable diagnostic help which should be used in most of the chronic cases. Many authors have reported cases in which the skin tests have enabled them to determine the etiologic factors. Some investigators suggested that skin tests should only be used in patients who have a history of personal or family allergy (M. Cohen,[12] Swinney[13]).

Skin tests were made on 43 of our 50 patients. Thirty-four patients gave positive reactions; 9 did not show any reactions. The highest number of positive reactions was obtained to "general excitants" (Sulzberger) like dust and feathers. Twenty-five patients gave reactions to foods, and of these only 4 agreed with the patients pre-suppositions. Five patients who were instructed to avoid foods to which they had positive reactions reported a definite improvement of their symptoms.

ETIOLOGY

The most important source of information for the determination of the etiology is the history. All authors have stressed that the patient's experience and observations should be more valued than the skin tests and laboratory findings.

An allergic history could be elicited in 23 patients. Of these cases, 11 had one and 12 had two or more members in the family with an allergic disease. The incidence of allergy in the family was about as high as it is found in asthma and hay fever; e.g., Cooke and Vander Veer[14] found in a study of 504 cases of hay fever and asthma that the family history was positive for allergy in 48 per cent.

Thirteen of our patients gave a personal history of other allergies. Some patients had 2 allergic diseases in the past. Five had bronchial asthma, 3 hay fever, 4 vasomotor rhinitis, 3 eczema, 3 gastrointestinal allergy and 2 migraine.

Next to the constitutional factors, acute and chronic infections or toxic changes of the gastrointestinal tract are mentioned as predisposing factors. It is explained that the damage of the gastric and intestinal mucosa that results from these conditions permits the absorption of incompletely digested proteins which are responsible for the production of the urticaria. The fundamental research work, on which these findings are based, was made in France (Chevalier[15]). M. Walzer[16] contributed prominently to these observations by studying the influence of different substances on the change of the absorption rate. Fifteen of our patients gave a history of gastrointestinal disturbances which were connected with their urticaria. Two patients had their first attacks of urticaria following the ingestion of alcohol.

Specific Etiologic Factors: According to the generally accepted theoretical explanation of the wheaking process in urticaria, is the cause of this phenomenon a disturbance of the function of the cutaneous blood vessels? The only way we are able, at the present time, to influence this mechanism is to prevent the disturbance by eliminating or reducing the contact with these factors which are known to provoke the change in the physiology of the cutaneous vessels. A complete list of all these factors is rather confusing. It was, therefore, of great practical value, when Fink and Gay suggested that the causative factors could be classified in 5 groups. Stokes and his co-workers called our attention to their findings that, especially in chronic cases, not one single element produces the urticaria, but a combination of different factors is more commonly to be confronted, and that the success of the therapy depends on the realization and evaluation of this "inter-play" of several components. In both publications allergy is not considered to be of prime importance for the etiology. Fink and Gay believe that infection is the most important factor. For the past decade bacterial allergy has figured prominently in the studies of respiratory allergies and has found many advocates. Recent papers on urticaria due to infection (Hansen-Pruess,[17] Traut[18]) make it justifiable to assume that bacterial sensitization can also be found in urticaria. Stokes and his co-workers thought that the psychogenic element deserved the greatest attention. The importance of this element has not been minimized in the recent literature, but it was stressed that, while the psychogenic factor is very important as a precipitating and secondary element, it should only be considered as the only culprit if all other factors have been thoroughly investigated and excluded (Winkenwerder, Feinberg).

If the experiences gained from respiratory allergies are taken into account and the recent literature on urticaria is considered, the etiologic factors can be grouped for practical purposes as follows:

A. Allergic factors:
   I. Exogenic or extrinsic
      a. Foods
      b. Drugs
      c. Contacts
      d. Inhalants
      e. Physical
   II. Endogenous or intrinsic
      a. Infections
      b. Endocrine
B. Psychogenic factors.

In all the factors, which are listed among the allergic types, an allergic reaction can be assumed and reasonably explained to be the underlying mechanism. The above list does not comprise all reported causative factors of urticaria. Sulzberger and Wolf[19] mention a number of diseases in which, apparently, the disturbances of the function of the cutaneous blood vessels cannot be explained as an allergic reaction; e.g., blood dyscrasias, malignant tumors, Hodgkin's disease. The finding of urticaria in these diseases, however, is, as the authors state, relatively rare.

Foods: In 12 of our patients, foods were found to be the causative factors. Six patients discovered the foods after they were added to their elimination diet. Six patients suspected certain foods and substantiated their pre-suppositions by repeated trials. In 4 of these patients, the skin tests corroborated the patients' experience. The following foods were found to be responsible: Citrus fruits (3), milk (2), fish (2), chocolate (2), tomato (2), strawberries (2), banana (1), wheat (1).*

In 7 other patients, the causative foods could not be definitely accounted for. Five patients, who recovered after avoiding a number of foods to which they had positive skin tests, could not verify the correctness of the tests by later trials. Two patients

*The numbers indicate how many patients found the particular food offending; some found more than one food.

recovered after they were placed on elimination diets, but were unable to detect the offending food after they returned to a normal diet.

Drugs: Four patients were definitely convinced by repeated trials that aspirin was responsible for their hives. Two of these patients had also found some foods as the cause of their urticaria.

The list of drugs, which are named in the literature as causative factors, is very long. Aspirin seems to be the most commonly mentioned drug. Fink and Gay found in their series phenolphthalein as the most frequently encountered drug. Among the newer drugs penicillin has been mentioned in several recent publications (Keefer,[20] Criep[21]).

Urticaria after injection of serum is a familiar observation. Waldbott and Asher[22] reported 4 cases in which urticaria of the serum-sickness type was brought on by ingestion, contact and infection.

It might be of interest that among our 21 patients, in whom urticaria was found to be due to foods and drugs, 14 had gastrointestinal symptoms preceding their urticarial attacks. These symptoms could be interpreted as urticaria of the gastrointestinal mucosa which would, therefore, contain the shock tissues which come in contact with the antigen at first. A similar behavior of the nasal mucosa preceding an asthmatic attack is a familiar observation. Some of the gastrointestinal symptoms could have been due to inflammatory or toxic changes of the mucosa with a consequent absorption of incompletely digested proteins. Regardless of how the gastrointestinal symptoms are interpreted, if they are elicited in the history, they might mean a helpful clue that foods or drugs are to be considered as probable etiologic factors. Only one patient, who complained of "indigestion" before his urticarial attacks occurred, did not recover after he was placed on a dietary regime. This patient was found to have a chronic cholecystitis.

Contacts: There was only one patient in our series who ascribed her urticaria to external contacts. This patient found that oxydol and rinso caused her hives. Contact allergens, which are described in the literature, usually produce urticaria also by ingestion or inhalation. Fungus infections of the skin, as shown by Wise and Sulzberger,[23] are also considered as contact allergens.

Inhalants: In none of our cases was it possible to trace the origin of the urticaria to an inhalant. Sulzberger and Vaughan[24] demonstrated reactions on passively sensitized sites after inhalation of silk. Derbes and Engelhardt[25] recently reported two cases in which the urticaria could be attributed to ragweed pollens. Twelve of our cases received environmental control instructions, which is an established procedure in difficult urticaria cases, and seven were also desensitized to dust and other inhalants. It is, however, impossible to state whether they derived a decisive benefit from these procedures since other etiologic factors were also considered in their treatment.

Physical: Two of our patients found that heat and one that cold provoked attacks of urticaria. All three patients also had attacks of urticaria which were precipitated by other factors. In two recent publications (Hopkins, Kesten, Hazel[26] and Grant, Pearson, Comeau[27]), it was shown that some types of physical urticaria have to be regarded as cholinogenic. Grant and co-workers have demonstrated that in some cases of urticaria provoked by heat and also by psychic influences, the lesions were produced by the release of acetylcholine at the termination of cutaneous nerves.

Infections: Acute infections are often mentioned as etiologic factors. All of our cases, in which infection was found to be of etiologic importance, were due to chronic infections. The following foci of infection were considered as possible sources of urticaria: Sinusitis (9), teeth (7), tonsillitis (3), pyorrhea (2), infected adenoids (1), cholecystitis (1), prostatitis (1), cervicitis (1), chronic salpingitis (2). Seven patients showed a definite improvement after the focal infection was eliminated or treated. Three patients had infected teeth removed; one of them noticed an exacerbation of his symptoms immediately following the removal of the teeth. On two patients tonsillectomies were performed. Two patients with sinusitis improved after they received injections of autogenous vaccine; they did not respond to elimination diets which were tried at first. Nine patients, in whom a chronic infection was suspected to be a causative factor, responded to a dietary regime, which shows that the finding of a focal infection does not necessarily mean that the infection has to be the causal element.

The most frequently described foci of infection that have been found to be responsible for the hives are teeth, tonsils and sinuses. Among the other foci,

the gall-bladder was once considered to be an important source of the hives (Menagh[28]). Hansen-Pruess recently reported several cases of urticaria of bacterial origin. One of his cases was due to a chronic pyelitis and five were due to intestinal infections which were caused by beta hemolytic streptococci as the stool cultures revealed. The urticaria disappeared in his patients as soon as the infections were cured by prontylin medication. Traut reported four cases of urticaria which he treated successfully with vaccines of rectal streptococci. The allergic mechanism of urticaria due to intestinal infestation, which can be mentioned in this connection, was demonstrated by W. Jadassohn.[29]

Endocrine: Zondek and Bromberg[30] presented in a recent publication convincing evidence that "allergic reactions may be due to endogenous allergens, produced within the organism by endocrine glands." The fluctuation of the level of the steroid hormones in the body that accompanies the menstrual cycle and the hormonal changes that occur during the climacteric period and are clinically more evident in females explain it that urticaria is almost exclusively influenced by "endocrine allergy" in female patients. Three of our patients noticed that their worst attacks of urticaria were associated with menstruation. Two patients stated that their urticaria coincided with menopausal symptoms. In three of these patients, the psychogenic element was very dominant. Good results with hormone therapy of urticaria by using the estrogenic hormone were described by Davison[31] and co-workers. It is possible that the results of the hormone therapy could be improved if Zondek's technique in testing the patients to hormones would be adopted and the desensitization would be based on the outcome of the tests. Cases of urticaria due to endocrine dysfunction of the thyroid gland have been mentioned in the literature (Winkenwerder).

Psychogenic Factors: The psychogenic element is considered as one of the most important factors in the etiology. Thirteen of our patients gave a history which suggested that nervous influences had a decisive bearing on the development of their hives. Only in three patients was nervousness found to be the only responsible factor. In the other patients, the nervousness precipitated or aggravated the urticaria. Stokes and his associates have stressed that the psychogenic element is the most commonly found "component" which can be associated with any of the other etiologic elements by "broadening the base of allergic susceptibilities."

TREATMENT

The treatment followed the usual outlines of the specific therapy of urticaria. The patients were instructed to avoid all drugs. Foods which were known to cause any allergic reaction previously or which were suspected by the patient were excluded from the diet. Some patients were placed on elimination diets; some were told to avoid foods that gave positive reactions to skin tests. A careful search for focal infection was made, and if the dietary regime did not benefit the patient's condition, the treatment of the infection was initiated.

Thirty-two patients were cured or definitely improved. Twenty-one recovered after dietary treatment and avoidance of drugs. In fourteen of these patients, other factors were also taken into consideration in the treatment. Five were treated simultaneously with autogenous vaccines; six were instructed to avoid all environmental allergens or were desensitized to inhalants, and four reported an improvement of their nervous condition after rest or some readjustment. In seven patients, the removal or the treatment of the focal infection seemed to be the decisive contribution for the successful therapy, but also in these cases were other etiologic components evident, as three patients noticed that after the elimination of the focal infection, mild attacks of urticaria occurred, which two patients attributed to foods and one to emotional upsets. One patient recovered after avoiding contact allergens. One patient was relieved by estrogenic hormone therapy, and two patients recovered after a readjustment of the psychogenic factor was accomplished by rest.

Five patients did not improve. Two of these had foci of infection which were suspected as causative factors, one having chronic cholecystitis and one infected tonsils. Both patients would not accept the advice to undergo an operation for the elimination of the focus.

Thirteen patients could not be followed up. They either did not return to the clinic for further treatment or were referred to their family physicians and could not be contacted. It is to be assumed that in a number of these patients the therapeutic efforts were not successful.

The results of the specific therapy are, as most observers have indicated, only in about 60 to 80 per

cent of the reported cases successful. The reason for the failure of the specific therapy in a number of cases is mainly due to the difficulties which are encountered in the determination of the etiologic factors, and which cannot always be overcome, even if the investigation has been conducted very painstakingly and has been based on the "complete knowledge of all potential causes" (Sulzberger) and an intelligent cooperation of the patient has been assured. The literature on urticaria manifests the efforts which have been made to improve and also to simplify the therapy by finding some non-specific method of treatment. Since spontaneous remissions even in longstanding cases of hives are commonly observed, the results of these methods are considered with a great deal of skepticism. Some of the suggested methods are purely empirical; some are based on theoretical consideration.

The results of the non-specific methods which were tried on a number of our patients were generally disappointing. Some of the methods used were: Potassium-rich and salt-poor diet (Rusk and Kenamore[32]), histaminase (Laymon[33]), histamine (Smith,[34] Alexander and Elliott[35]), nicotine acid (Chambers and Bernton[36]), hapamine (Cohen and Friedman[37]). Of the drugs used, histaminase was given to several patients four years ago. It did not beneficially influence the course of the urticaria in any case. The same can be said about the new panacea, hapamine. Black[38] recently reported an impressive number of patients who benefited by vitamin K, which he thought might influence the permeability of the capillary walls. Six of our patients received vitamin K. The only patient who improved after this medication was at the same time on an elimination diet. Feinberg[39] recently reported good results in the treatment of urticaria with a new histamine antagonist (synthetic benzydryl alkamine ether).

SUMMARY

The clinical data and etiologic factors of 50 cases of urticaria are reviewed. After surveying the recent literature on urticaria in the study of the etiology, it was found that an allergic reaction of extrinsic or intrinsic origin can be assumed to be the underlying mechanism in the majority of the cases. The extrinsic factors consist of foods, drugs, contacts, inhalants and physical agents; the intrinsic, of infections and endocrine disturbances. The psychogenic element is the most important precipitating factor. A combination of several factors has to be considered in chronic cases. The specific therapy is only in about 60 to 80 per cent of the cases successful on account of the difficulties in the determination of the etiology, which is not benefited much by skin tests. The results of non-specific methods are disappointing. Two newly suggested methods are awaiting further clinical trials.

Since this paper was written, it has been confirmed repeatedly that the antihistaminic drugs (benadryl, pyribenzamine) have a beneficial, but only palliative, effect on urticaria.

REFERENCES

1. Stokes, J. H., Kulcher, G. V., and Pillsbury, D. M.: *Arch. Derm. and Syph.* **31**:470, 1935.
2. Fink, A. I., and Gay, L. N.: *Bull. Johns Hopkins Hosp.* **55**:280-292, 1934.
3. Urbach, E.: *Muenchen. Med. Wochenschrift* **84**:2054-2060, 1937.
4. Baird, Perry C., Jr.: *New England J. Med.* **224**: 649-658, 1941.
5. Winkenwerder, Walter L.: *Penn. M. J.* **43**:1073-1079, 1940.
6. Sulzberger, Marion B.: Dermatologic Allergy, Charles C. Thomas, Publisher.
7. Brown, G. F.: *Annals Int. Med.* **3**:6:591, 1929.
8. Feinberg, Samuel M.: Allergy in Practice, The Year Book Publishers, Inc.
9. Vaughan, Warren T.: Practice of Allergy, C. V. Mosby Company, 1939.
10. Kahn, I. S., and Grothaus, Emma M.: *Southern M. J.* **32**:1086-92, 1940.
11. Johnston, C. R. N.: *Cleveland Clin. Quart.* **1**:147, 1940.
12. Cohen, Milton B.: *J. All.* **11**:2:209, 1940.
13. Swinney, Boen: *Southern M. J.* **34**:855-58, 1941.
14. Cooke, R. A., and Vander Veer, A.: *J. Immunol.* **1**:201, 1916.
15. Chevalier, quoted from Urbach.
16. Walzer, M.: *J. Immunol.* **11**:249, 1926.
17. Hansen-Pruess, O. C.: *J. Allergy* **9**:577-583, 1938.
18. Traut, Eugene F.: *Arch. Derm. and Syph.* **40**:368-373, 1939.
19. Sulzberger, Marion B., and Wolf, Jack: Dermatologic Therapy, The Year Book Publishers, 1940.
20. Keefer, C. S., Blake, F. G., Marshall, E. K., Jr., Lockwood, J. S., and Wood, W. B., Jr.: *J.A.M.A.* **122**: 1217, 1943.
21. Criep, L. H.: *J.A.M.A.* **126**:429, 1944.
22. Waldbott, G. L., and Asher, M. S.: *J. Allergy* **9**: 584-92, 1938.
23. Wise, Fred, and Sulzberger, Marion B.: *J.A.M.A.* **95**:1504, 1930.
24. Sulzberger, Marion B., and Vaughan, Warren T.: *J. Allergy* **5**:554, 1934.

25. Derbes, V. J., and Engelhardt, H. T.: *Southern M. J.* **37**:729, 1944.
26. Hopkins, J. G., Kesten, M. B., and Hazel, O. G.: *Arch. Derm. and Syph.* **38**:679, 1938.
27. Grant, R. T., Pearson, R. S. B., and Comeau, W. J.: *Clin. S.* **2**:253, 1936.
28. Menagh, F. R.: *J.A.M.A.* **90**:668, 1928.
29. Jadassohn, quoted from Sulzberger.
30. Zondek, Bernhard, and Bromberg, Y. M.: *J. Allergy* **16**:1-16, 1945.
31. Davison, H. M., Lowance, M. T., and Barnett, C. F.: Tr. Am. Ther. Soc. **37**:49, 1937-38.
32. Rusk, Howard A., and Kenamore, Bruce D.: *Ann. Int. Med.* **11**:1838-44, 1939.
33. Laymon, Carl W.: *Minnesota M. J.* **25**:466, 1942.
34. Smith, Leslie M.: *Arch. Derm. and Syph.* **44**:883, 1941.
35. Alexander, H. L., and Elliott, Robert W.: *J.A.M.A.* **114**:522, 1940.
36. Chambers, Doris C., and Bernton, Harry S.: *J. Allergy* **15**:141, 1944.
37. Cohen, M. B., and Friedman, M. J.: *J. Allergy* **14**:195, 1943.
38. Black, J. H.: *J. Allergy* **16**:83, 1945.
39. Feinberg, Samuel M., and Friedlander, Sidney: *J. Allergy* **16**:296, 1945.

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Substances Placed On Body Surface Need More Study.

Referring to cases of poisoning associated with the use of thioglycolic acid in the so-called cold wave process for permanent waving of the hair, the June 29 issue of *The Journal of the American Medical Association* says editorially that "as much careful evidence needs to be accumulated regarding the safety of substances placed on the surface of the body as those taken into its interior before these processes are released for use to the general public."

The statement was made in connection with an article in which Carey P. McCord, M.D., of Detroit, called attention to certain facts which he believed were overlooked by Lawrence H. Cotter, M.D., of New York, in his discussion of the cold wave process in *The Journal* of June 15. Dr. McCord believes that damage to the liver by the use of cold wave chemicals has not yet been definitely shown in any instance and that allergic responses are infrequent when materials used are properly prepared.

"Not withstanding these statements," the latest issue of *The Journal* says, "the fact remains that some 50 different commercial agencies are engaged in the manufacture of materials used in cold wave processes, that there exist no definite standards as to what is safe or harmful, that experimentation before launching such products is for the most part inadequate and incomplete and that it is time for public recognition of the fact that as much careful evidence needs to be accumulated regarding the safety of substances placed on the surface of the body as those taken into its interior before these preparations are released for use to the general public."

Caution Against Use of Mineral Oil in Food.

High prices and the scarcity of edible vegetable oils have caused many restaurants to use mineral oil in food, according to the August 24 issue of *The Journal of the American Medical Association*, which warns that this practice is harmful to patrons. *The Journal* says:

Attention has been called recently to the occurrence of fecal incontinence [diarrhea] due to the ingestion of excessive quantities of mineral oil by unsuspecting patrons of restaurants where mineral oil has been substituted for edible oils in salad dressings. The Council on Foods and Nutrition called attention to the harmful effects of mineral oil in foods in the following paragraph:

> It has been shown that the ingestion of liquid petrolatum is capable of interfering seriously with the absorption of carotene, vitamin D, calcium and phosphorus and vitamin K. The effects of its prolonged use have not been thoroughly investigated, but there is sufficient evidence of possible harmful effects to justify the conclusion that its indiscriminate use in foods or in cooking is not in the interest of good nutrition, and any such use should be under careful supervision of a physician.

In reply to inquiries about the legality of mineral oil in salad dressings the Food and Drug Administration has expressed the opinion that "mineral oil salad dressings must be regarded as adulterated under the Federal Food, Drug and Cosmetic Act under any form of labeling employed." Mineral oil should certainly not be used except under the supervision of a physician familiar with the problems involved and should not be used indiscriminately in foods.

BLAST CONCUSSION—OBSERVATIONS RE: HANDLING*

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Blast injuries are fairly common, and numerous cases have been seen since onset of World War II. Unprecedented amounts of high explosives used by artillery and air forces have resulted in an unusual number of cases, presenting a syndrome which has been shown to be caused by varying degrees of injury to tissue. These injuries are due directly to the blast and concussion of high explosives expending themselves at varying distances from the patient.[1,2,8]

The detonation of high explosives produces an excessively intense longitudinal compression wave, which is grossly similar to that of a sound wave of high amplitude. The wave consists of two components or phases: a pressure and a suction component. The velocity of this wave varies between 1,500 and 7,600 meters per second. The pressure component may be as high as 200 atmospheres (1,360 kilograms, or about 3,000 pounds) per square inch; while the suction component may approximate that of a perfect vacuum.[4, 9, 11, 13, 18]

The force of a blast wave varies inversely with the distance of the blast.[3]

It should be pointed out that any particular injury may be primarily caused by either the suction or by the pressure component, or, as is usually the case, any post concussion syndrome is caused by both factors.[14]

At autopsy the outstanding pathological findings are: 1. Hemorrhage (multiple, minute) due to rupture of the smaller vessels and capillaries. This is generally found to involve the (a) ear, (b) sclera, (c) thoracic viscera (lungs, pleura, myocardium, endocardium and pericardium), (d) abdominal viscera (gastro-intestinal tract, adrenals, and even the liver, spleen, pancreas, as well as (e) central nervous system may become involved; 2. gross tearing or rupture of the pulmonary alveoli, the aorta, and of the various abdominal viscera may occur.[12,16]

All other things being equal, the extent and severity of the various injuries are determined by the relative size of the explosion or concussion, and varies inversely with the distance that the patient is from the explosion. The amount of protection (clothing, walls, etc.) that intervenes between the patient and the explosion is also an important factor in determining the degree of injury produced, as is also the position of the patient with reference to the point of origin of the blast.[7,8,12,14]

Diagnosis is generally fairly easy, and is determined chiefly by the history of an explosion and blast having actually occurred.

The frequency of aural, pulmonary, alimentary and circulatory lesions is stressed by most writers on the subject, but not so much those involving the central nervous system, which latter are quite important.

Ears.—Rupture of the drum is a common finding. Congestion and hemorrhage into the membrana typani is quite often present. A varying degree of deafness—which may last for an indefinite length of time—is almost always associated with these findings.[21,23]

Eyes.—Retinal and subconjunctival hemorrhage, while not a common finding, has been noted.

Respiratory System.—Often there may be few or no complaints whatsoever. It has been noted that respiratory failure may occur—due to hemorrhage involving the respiratory center in the brain. In this event it is suggested that artificial respiration should be continued for an indefinite period of time, and may prove life saving. In severely injured people the physical findings during the first twenty-four hours may be very few, but later they may develop definite signs indicative of actual pneumonia. The pneumonitis in these instances is not as amenable to therapy as is the usual type of lobar pneumonia. The symptoms often complained of are: 1. pain (substernal), 2. dyspnoea, 3. hemoptysis, 4. feeling of tightness about the chest.[10,19,22]

Circulatory System.—Except for those few cases resulting in rupture of the aorta, or of hemorrhage into the pericardial sac or into the myocardium, there are very few symptoms directly referable to the circulatory system. Disturbance of the blood pressure reading is, however, not an uncommon finding. This is hardly ever due to direct involvement of the cardiac-vascular system, but is caused by

*The material for this article was collected, for the most part, from personal observations made while serving with a very active Field Hospital of the E. T. O.

hemorrhage into the adrenal gland, with resulting rapid atrophy. It is generally believed that a systolic blood pressure below 100 mm. of mercury will result in death of the patient.

Gastro-Intestinal System.—Symptoms referable to injury of the gastro-intestinal tract are occasionally found in a certain number of patients—(pain, and rigidity of upper abdomen, nausea, vomiting, hematemesis, melena, etc.). These symptoms are not often complained of. This is surprising, in view of the fact that at autopsy, subserous hemorrhages may very often be found throughout the entire gastro-intestinal tract. Extensive subserous hemorrhage seemed to account for the symptoms of acute surgical conditions of the abdomen in a number of cases. Hemorrhages are not uncommon in the mesentery. Perforation of the stomach or of the intestine has also been a finding, as has peritonitis.

Nervous System.—It is not an infrequent occurrence to find symptoms presented on this score. Respiratory failure is not too uncommon. Cerebral concussion occurs quite often—but this is almost always due to the fact that the patient is often thrown to the ground, etc. Subdural hemorrhage on the under surface of the forebrain has occasionally been reported (Stewart and Mott—cited by Theis).

Paraesthesias, anaesthesia, paralysis, etc., involving the various peripheral nerves has also been found in some cases.[5,6,7,20] Certain psychoneuroses are a not infrequent accompaniment, and in many cases these are mild in severity and limited in duration.[21]

The following cases, which have come under our observation, may be briefly cited: J. D., an officer on an L. S. T., was admitted to our hospital following an attack on his ship by a submarine torpedo in the English Channel. He was in shock, and somewhat disoriented, and, except for a slight laceration of the scrotum, the physical examination was entirely negative. His responses to questions, while intelligent, were obviously slowed. He was suffering from partial amnesia and aphasia. At one to two hourly intervals he was asked the following questions repeatedly, by the same medical officers:

1. "Hello Lieutenant, how are you?"
2. "Anything bothering you?"
3. "What happened to you?"
4. "Did you ever see me before?"

For four and one-half days he gave the same answers in the same monotonous, unanimated and uninterested tone.

1. "Hello Captain."
2. "No."
3. "Don't know."
4. "No."

The afternoon of the fifth day a sparkle appeared in his eyes; he became suddenly alert and manifested a normal interest in himself and in his surroundings. His answers to these questions were now as follows:

1. "I'm O.K. Captain; how are you?"
2. "I don't really know, but I don't believe so."
3. "Damned if I know. Everything happened so quickly. The last I remember was that I was on the ship—then something happened and everything went blank."
4. "Hell, yes—you're Captain ———; you were here about an hour or so ago, talking to me."

From then on he continued to improve very rapidly and appeared to be perfectly normal. He was evacuated to the rear for rest, convalescence and further observation. Nine months later he still showed no abnormalities.

Several cases of anxiety neuroses, following blast concussion, were also observed. These were mild to severe in the type of their manifestations. Symptoms lasting for varying periods of time.

Deaf mutism has also been noted in a fair percentage of cases. In over 70 per cent this is of a functional nature. The early and proper institution of psychotherapy will result in complete recovery in the vast majority of these patients.[25]

With regard to the therapy and the handling of cases of blast concussion, the injuries are generally divided into three chief groups: 1. the mild; 2. the moderate; 3. the severe.

The "mild" are frequently overlooked, but, when recognized (substernal pain, tightness of chest, deafness, irritating paroxysmal cough), treatment consists chiefly of absolute rest, reassurance, and close observation for a period of about three weeks.

The "moderate" group often presents problems. It is in this group that associated injuries are almost always present. It is in these cases that our therapeutic acumen is really put to the acid test. Traumatic injuries do not do so well when associated with blast, but it is generally believed that the presence of blast should not materially change the

course of treatment of the obvious traumatic injury (surgery, transfusion, application of casts, etc.).

The "severe" cases of blast need no further comment, because almost always the patient will die, and most often within the first twenty-four hours.

The following case is being presented in order to bring out and emphasize a number of pertinent points regarding the handling of cases of blast concussion. 1. With a history of an explosion having occurred within a reasonable distance of the patient, a diagnosis of blast concussion must always be seriously considered—as the primary or as an associated condition. 2. The futility of repeated intravenous or subcutaneous infusions should be borne in mind in the treatment of the syndrome caused by blast concussion *per se*. Shock, secondary to fluid loss, due to extensive damage to pulmonary epithelium, with resulting loss of large amounts of circulating fluid into the lungs, may be quite severe. It should be borne in mind that any increase in the intravascular hydrostatic pressure resulting from the parenteral introduction of fluids into the pulmonary tissue. This results in asphyxia and in early death.

CASE REPORT

Major G. E. D. was wounded 26 December 1944, at 1500 hours. A number of very high powered explosives were dropped relatively close to him. He was taken to the aid station, etc., and finally was admitted to the ———— Evacuation Hospital, 26 December at 2100 hours—just six hours after being wounded—in a condition of "impending shock", with "multiple penetrating wounds of the back, neck, both upper and lower extremities." His wounds were debrided and the usual treatment instituted (penicillin, shock, etc.) At 2040 hours, the pulse was 80 per minute and the blood pressure 130/76. At 2100 hours he was given 500 cc. of plasma; at 2345—500 cc. of whole blood, and 0200 hours (27 December 1944) 500 cc. of plasma were administered. At 1200 hours he received 1,000 cc. of 5 per cent glucose in saline. At 2000 hours of 27 December he was transferred to the ———— Field Hospital (29 hours after being wounded, and only 23 hours after having been admitted to the Evacuation Hospital). At 2100 hours it was noted that his general condition was very poor; blood pressure at this time was 40/0. At 2130 he was given morphine sulphate grains ¼: at 2200 hours he was given 20,000 units of penicillin and 15 grains of sulfadiazine; at 2300 hours he was given an intravenous infusion of 1,000 cc. of 5 per cent glucose in saline. At 0125 hours (28 December 1944) his blood pressure was noted as 60/58; at 0200 hours the blood pressure dropped to 40/20. He was now given 500 cc. of plasma. (At this time the nurse who had been caring for him suggested the possibility of the diagnosis of blast concussion. This was concurred in by the attending surgeon.) At 0230 hours his condition appeared quite critical. He was given 2 cc. of coramine and several minutes later 1 cc. of 1-1,000 adrenaline. At 0300 hours he was pronounced dead (36 hours after being wounded).

Autopsy performed at 1500 hours of 28 December 1944. Only the positive findings will be noted here. Rigor mortis was quite marked. Ears and sclerae were negative. Multiple penetrating wounds, as noted above. Numerous petechiae, of varying sizes, were noted over the entire gastro-intestinal tract—just under the serosa. These were especially abundant and very prominent in the duodenum, jejunum, upper ileum and, to some extent, in the subserosa of the stomach, but most severe about the ileo-cecal area. The blood vessels of the mesentery all appeared very much enlarged. Pericardial cavity—A little more than 300 cc. of free blood was present. Lungs—When placed in a pail of water all the lobes sank to the bottom at once. The visceral pleura, covering the entire lung surfaces, showed the presence of very small hemorrhages, just under the pleural surfaces. Cut surface of any portion of any of the lobes—and in any direction—presents a dark blue-black color, except for a very small strip about the hilum of both lungs. Scraping of the cut surface showed blood and a very small amount of air bubbles. The bronchi appeared to be quite normal. The blood vessels all appeared to be moderately engorged—especially the medium and larger sized pulmonary veins. Adrenals—Very little, if any, adrenal tissue could be demonstrated. What appeared to be the capsule was filled by a blood clot.

The microscopic examination of the lung tissue was reported as follows (reported by Major Reuben Cares, Chief of Pathology Section, Seventh Medical Laboratory):

"Lungs: The alveoli are diffusely filled with a hemorrhagic exudate, and edema fluid. The vessels

are unusually congested." Final pathological diagnosis:

1. Hemorrhage, pulmonary, severe, bilateral.
2. Hemopericardium, severe (cardiac tamponade).
3. Numerous areas of ecchymosis and petechiae scattered throughout the visceral pleura and in the subserosa of the entire gastro-intestinal tract.
4. Congestion, passive of viscera.
5. Autolysis of both adrenal glands (caused by hemorrhage into glands).
6. Wounds, penetrating, multiple of body.

COMMENT

In summarizing, and looking back over the various aspects of our cases, several points are brought out and become clear and should be emphasized. In every case in which there is a history of an explosion, the diagnosis of "blast concussion" should be entertained—as the primary or as an associated condition. In any case in which such a history is obtained and can be substantiated, this diagnosis should always be assumed, until it is definitely proven to be otherwise.

The possibility of hemorrhage into the adrenal glands, with resulting atrophy and immediate dysfunction, should not be lost sight of—and the Waterhouse-Friedrichson syndrome should not be forgotten. The symptoms of shock—primary or secondary—must be remembered, and treated appropriately.[24] It should, however, also be remembered that parenteral administration of fluids is not a panacea for all the ills that men may be heir to, and that over-burdening of a circulatory system, whose efficiency has been impaired and lowered (rupture of smaller vessels, capillary bed, alveoli, and even of the larger vessels [aorta] and of the viscera, etc.) will simply add to the burden of this damaged circulatory system.

The fact that various neurological as well as some types of psychoneuroses may often be seen in cases of blast concussion, should also be emphasized.

Treatment and handling of those cases is largely determined by accurate diagnosis and taking full cognizance of all the facts as well as an understanding of the underlying pathological physiology involved—and a realization that although, ". . . time is of the essence,"—very careful and cautious early handling in a negative as well as in a positive manner is essential.

REFERENCES

1. Zuckerman, S.: Problem of Blast Injuries; Proc. Royal Soc. Med. **34**:171, 1941.
2. Hadfield, G.: Problem of Blast Injuries; Proc. Royal Soc. Med. **34**:189, 1941.
3. Tunbridge, R. E.: Cause, Effect and Treatment of Air Blast Injuries; *War Medicine* **7**:3-6, January, 1945.
4. Brubaker, R. E.: Air Blast Injury; *Bul. U. S. Army Med. Dept. No. 87*, April, 1945, 110-114.
5. Mitchell, S. W., Morehouse, G. R., and Koen, W. W., Jr.; Reflex Paralysis; Circular No. 16, Surg. Gen. Off., March 10, 1864.
6. Mott, F. W.: The Effects of High Explosives Upon the Central Nervous System, *Lancet*, 1916.
7. Harker, D. R.: Physiological Effects of Air Concussion; *Am. J. Physiol.*, 1924.
8. Zuckerman, S.: Experimental Studies of Blast Injuries to Lungs; *Lancet*, 1940.
9. Pugh, H. L.: Blast Injuries; *Surg. Clin. of No. America*, December, 1943.
10. King, J. D., and Curtis, G. M.: Lung Injury Due to Detonation of High Explosives; *Surg., Gyn. and Obs.* **74**:53-62, January, 1942.
11. Williams, E. R. P.: Blast Effects in Warfare; *Brit. J. Surg.* **30**:38-49, July, 1942.
12. Tunbridge, R. E., and Wilson, J. V.: Path. and Clin. Findings in Blast Injury; *Quart. J. Med.* **12**:169-184, July, 1943.
13. Theis, F. V.: Atmospheric and Immersion Blast Injuries. *War Med.* **4**:262-269, September, 1943.
14. Williams, E. R. P.: Blast Effects in Warfare; *Dia. Med.* **19**:306, April 5, 1943.
15. Clark, S. L.: Blast Injury; *Am. J. Nursing* **43**:974-976, November, 1943.
16. Burbank, B., and Forcee, J. H.: Bomb Blast Injuries; *Mil. Surgeon* **93**:124-132, August, 1943.
17. Brown, Denny D.: Effect of High Explosives and Post Traumatic Syndrome; Tr. Am. Neur. Ass. **69**:98-102, 1943.
18. Baily, H.: Blast Explosions; *J. Internat. Coll. of Surg.* **7**:257-262, July-August, 1944.
19. Barrow, D. W., and Rhoads, H. T.: Blast Concussion Injury; *J.A.M.A.* **125**:900-902, July 29, 1944.
20. Garai, O.: Blast Injury—Nonfatal Case with Neurological Signs, *Lancet* **1**:788-789, June 17, 1944.
21. Linn, L., and Stein, M. H.: Psychiatric Study of Blast Injuries of Ear: *M. Bull. No. African Theater of Op. No. 6* **1**:6-7, June, 1944.
22. Curtis, G. M., and King, J. D.: Blast Injuries of Lungs; *Wisconsin Med. J.* **43**:413-419, April, 1944.
23. Silcox, L. E., and Schenck, H. P.: Blast Injuries of Ears; *Arch. Otolaryng.* **39**:412-413, May, 1944.
24. Clark, S. L.: Blast Injury—Relation to Concussion; *Quart. Bull. Northwestern University Med. School* **18**:81-90, 1944.
25. Zilboorg, Gregory: Some Aspects of Psychiatry in the U.S.S.R.—*American Review of Soviet Medicine*, August, 1944.

3823 North Pershing Drive.

IMMEDIATE POSTPARTUM REPAIR OF PERINEAL LACERATIONS

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

After delivery of the baby and placenta, the care of the mother is not complete without a careful examination of the perineum and vagina. Lacerations in both areas are common following normal spontaneous deliveries and should not be overlooked because the patient had a short easy labor and delivery. Fatalities have followed the failure of detection and consequent repair of lacerations.

Often the first indication of a laceration is a small amount of bright red blood as the shoulders and thorax are being delivered. As a rule, during expulsion of the head the soft tissues are compressed and bleeding does not occur. Blanching of the skin, especially along a former suture line, while the head is crowning, will indicate the site of laceration.

Immediately following the second stage, bleeding may not be evident for a few minutes but then become the outstanding diagnostic sign. The reduction of blood loss is the first consideration in the immediate repair of perineal and vaginal lacerations.

In obese patients, otherwise easily detected perineal lacerations may be obscured by a fold of fat. Careful inspection with separation of the labia is required for exposure. This inspection is necessary in thin patients should the laceration extend to the muco-cutaneous border of the anus.

Sulcus tears, as well as all vaginal tears, require wide exposure because of folds in the mucous membrane. Ordinary specula may suffice but, as a rule, "L" bladed retractors are of much greater help.

Superficial lacerations around the urethra ordinarily do not bleed excessively, but should be repaired because of their interference with urination.

It is doubtful whether routine inspection of the cervix is indicated but it should be done whenever it is under suspicion and in all instances of unusual bleeding. Here, exposure is all important and requires a good light, retractors and anesthesia.

In addition to the reduction in blood loss, the immediate repair of lacerations diminishes infections and promotes healing. Within twelve to twenty-four hours, and sometimes sooner, there is marked edema which complicates the repair and decreases the chances of primary union. The patient is immeasurably more comfortable with an immediate repair. This comfort is not only evident in the puerperium but also in later life because of the absence of scarring and improved perineal support. In addition, improved support usually eliminates the need for plastic operations at the end of the reproductive period.

In recent years the trend has been toward the use of finer suture material in all branches of surgery. 00 and 0 chromic catgut cause less tissue reaction and, by virtue of the lesser reaction, are conducive to better results. Mass suturing is condemned in all instances because of tissue strangulation and inaccurate anatomical tissue apposition. A more normal function will be restored when like tissue is accurately approximated without strangulation or tension.

The extent of the laceration will often determine the type of anesthetic. In the vast majority of cases local use of novocaine is sufficient. The majority of tears through the sphincter and into the rectum, and those in the sulci and cervix will require pudendal block, spinal or general anesthesia. The more extensive tears are better managed in a hospital. Some may require consultation.

It is well to keep in mind that a tear may be avoided, or its extent reduced, by an episiotomy.

PUBLIC HEALTH

L. J. ROPER, M. D.
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for September, 1946, as compared with the same month in 1945, and for the period of January through September, 1946, compared with the same period in 1945, follows:

	Sept. 1946	Sept. 1945	Jan.-Sept. 1946	Jan.-Sept. 1945
Typhoid and Paratyphoid	13	43	98	128
Diarrhea and Dysentery	198	1,773	2,323	6,228
Measles	56	19	12,887	1,255
Scarlet Fever	94	216	2,175	2,902
Diphtheria	53	66	345	232
Poliomyelitis	19	109	86	283
Meningitis	12	11	178	198
Undulant Fever	7	5	49	26
Rocky Mountain Spotted Fever	13	14	89	92
Tularemia	5	6	50	38

TULAREMIA

Recently the State Department of Health began the tabulation of data on 1,000 cases of tularemia. Beginning in 1929 questionnaires were sent to all physicians reporting a case of tularemia with the request that they be filled out and returned to the State Department of Health. Through 1945, 1,136 cases were reported and 1,000 questionnaires returned. Since no unusual effort was made to expedite the return of these questionnaires, it is exceedingly gratifying to note the cooperation of the physicians in returning 96.5 per cent of these queries.

In reviewing the information obtained from the physicians several interesting facts have been noted. First, the number of cases reported as having been acquired by means other than the handling of wild rabbits is much larger and more varied than expected. Although the handling of wild rabbits is by far the most common method of contracting the disease, it was noted that in at least 28 instances a tick was incriminated, in 13 the cat, in 5 the opossum, in 4 the skunk, in 3 the dog, in 2 the woodchuck, in 2 the quail, in 2 the squirrel and in 2 the hog. One case was attributed to each of the following animals or insects: sheep (shearing), raccoon, fox, chicken, rat, deer fly, and flea. In all, at least 6.8 per cent of cases are believed to have been acquired through contact with 16 animals other than the rabbit.

In studying the modes of transmission of the disease, it was found that 3 individuals acquired it by carrying game. In one instance the killed rabbit was tied to the belt and apparently bled on the trousers' leg. This patient had ulcers about the knee and calf of the leg. Another individual carried rabbits in a hunting coat and developed a large ulcer on his back in the area where the rabbits pressed against him. A third person developed ulcers on his abdomen where burns previously acquired became infected by carrying squirrels which he had killed.

The case fatality of tularemia varied according to season. Of the cases studied 73.5 per cent occurred in the winter months; that is, the date of onset was between October 1st and March 1st. For this group the fatality rate was 6.6 per cent. The 26.5 per cent of the cases occurring in the summer showed a higher fatality rate of 11.3 per cent. The probability that the differences in the two rates could occur by chance alone is approximately 1 in 40. Therefore it is felt that there is a true seasonal variation in the severity of the disease.

With the increasing supply of streptomycin, the disease has lost much of its significance. In no other infection is the action of this antibiotic so dramatic. If given early in the disease, there is a prompt response with temperature falling to normal in 24-48 hours and marked improvement in both local and constitutional symptoms. If given late in the disease, however, there is little or no effect on the course of the disease. Streptomycin, if properly used, will make tularemia of little more importance than the common cold.

FORUM

Commission On Post-Mortem Examinations.

An outstanding piece of legislation enacted during the last General Assembly was the creation of a Commission on Post-Mortem Examinations, and prescribing its powers, duties and functions. The Medical Society of Virginia's Committee on Medical Examiner System, headed by Dr. Wyndham B. Blanton, was largely responsible for the passage of this bill. The Commission consists of five ex-officio members—the Attorney General, the State Health Commissioner, the Superintendent of State Police, and the Deans of the State's two Medical Schools. One of their first duties was to appoint a Chief Medical Examiner, and one or more coroners for each county and city in the State having no coroner in office on October 1st, 1946.

Dr. Herbert Stewart Breyfogle of St. Louis has been named as Virginia's first Chief Medical Examiner. He is a native of Kansas City and thirty-three years of age. At present he is Director of the Medical-Legal Department of St. Louis County, pathologist for St. Louis County Hospital, instructor at Washington University School of Medicine, and acting coroner of St. Louis County. He will have the use of office space and laboratory facilities at the Medical College of Virginia. As it is likely that Dr. Breyfogle will be unable to assume his duties until the first of the year, Dr. George Zur Williams, pathologist at the Medical College of Virginia, has been named to fill this position, pending Dr. Breyfogle's arrival.

Coroners to represent cities and counties named to October 9th are:

City	Coroner	Address
Buena Vista	Dr. R. R. Eason	Buena Vista
Clifton Forge	Dr. L. A. Houff	Clifton Forge
Martinsville	Dr. H. G. Hammond	Martinsville
Williamsburg	Dr. J. M. Henderson	Williamsburg
Winchester	Dr. Herman I. Pifer	Winchester

County	Coroner	Address
Accomack	Dr. Jos. L. DeCormis	Accomac
Amelia	Dr. James T. O'Neal	Amelia C. H.
Appomattox	Dr. C. G. O'Brien	Appomattox
Bath	Dr. I. T. Hornbarger	Hot Springs
Bedford	Dr. E. L. Johnson	Bedford
	Dr. W. V. Rucker	Bedford
Buckingham	Dr. Garland Dyches	Dillwyn
	Dr. W. A. Pennington	Buckingham
Charlotte	Dr. Thomas Watkins	Drakes Branch
	Dr. H. C. Chalmers	Brookneal
Clarke	Dr. Frank Tappan	Berryville
Cumberland	Dr. E. B. Nuckols	Cumberland
	Dr. N. P. Snead	Cartersville
Dinwiddie	Dr. W. J. Mayes	Church Road
Essex	Dr. J. W. Chinn	Tappahannock
	Dr. J. M. Gouldin	Tappahannock
Fauquier	Dr. George H. Davis	Warrenton
	Dr. J. E. Knight	Warrenton
Fluvanna	Dr. J. H. Yeatman	Fork Union
	Dr. A. C. Whitley	Palmyra
Frederick	Dr. Herman I. Pifer	Winchester
Gloucester	Dr. H. A. Tabb	Gloucester
	Dr. James W. Smith	Hayes Store
Greensville	Dr. G. M. Naff	Emporia
Hanover	Dr. A. E. Murray	Beaverdam
	Dr. Judson Vaughan	Ashland
	Dr. A. B. Gravatt	Ellerson
Henry	Dr. D. H. Mason	Ridgeway
	Dr. L. A. Faudree	Bassett
James City	Dr. A. M. Sneed	Toano
King and Queen	Dr. R. D. Bates	Newtown
King William	Dr. A. W. Lewis	Aylett
	Dr. W. H. Hosfield	West Point
Lee	Dr. Grover Sumpter	Rose Hill
	Dr. Thomas S. Ely	Jonesville
Louisa	Dr. H. W. Judd	Mineral
Lunenburg	Dr. H. B. Showalter	Kenbridge
Mathews	Dr. R. B. Bowles	Mathews
	Dr. John R. Gill	Mathews
Middlesex	Dr. H. F. Hoskins	Saluda
New Kent	Dr. J. R. Parker	Providence Forge
Northampton	Dr. J. G. Goode	Cape Charles
	Dr. J. E. Gladstone	Exmore
Northumberland	Dr. M. N. Neal	Heathsville
	Dr. Leonard Booker	Lottsburg
Nottoway	Dr. J. M. Hurt	Blackstone
Page	Dr. George H. Long	Luray
Patrick	Dr. B. A. Hopkins	Stuart
	Dr. A. M. Gates	Ararat
Pittsylvania	Dr. H. H. Hammer	Chatham
Prince Edward	Dr. W. Edward Smith	Farmville
Rappahannock	Dr. John P. Snead	Sperryville
Shenandoah	Dr. Harold Miller	Woodstock
Sussex	Dr. R. B. McEwen	Wakefield
	Dr. Maurice Rosenburg	Waverly
Warwick	Dr. Melvin R. Horne	Hilton Village
	Dr. C. P. Jones, Jr.	Hilton Village
Westmoreland	Dr. Edward T. Ames	Montross
	Dr. Charles H. Griffith	Machodoc
Wise	Dr. N. F. Hix	Wise
York	Dr. L. O. Powell	Seaford

Progress Report on the Study of Child Health Services.

The survey of the Child Health Services in Virginia which was begun in March, 1946, is near its conclusion. With the exception of North Carolina in which the pilot survey was made, Virginia is the third in line with its survey to date.

The returns on the survey, while not perfect, are gratifying nevertheless. They are as follows:

	Number in Virginia	Percentage Survey Completed
General Hospitals	112	100
Community Health Organizations	91	94
Physicians	2,107	63
Dentists	935	61
Pediatricians	65	86

These report schedules now have been sent to the central office for tabulation. After tabulation the results will be sent back to the Executive Committee of the Virginia Study for presentation to those groups and organizations for whom such information would be of help in the development of a future constructive program. These may be state groups or local county groups.

Such questions as these may be answered for Virginia:

What is the volume of care rendered to children?

Are physicians and dentists available in all areas to care for children?

How far do children have to travel to see a specialist?

Where are the hospitals that take children?

What are the hospitals like and how far away?

Where are out-patient services available?

For each community, what services are available by official and voluntary agencies?

What is the volume of care?

Who gives it?

Who receives it?

What is it like?

These are only sample questions for which answers will be available. The figures can be broken down for counties or given as state totals.

It is hoped that the tabulations may be completed for Virginia by mid-year of 1947.

Annual Post-Graduate Course at University of Virginia Hospital.

Below is given the program for the post-graduate courses in Ophthalmology and Otolaryngology to be held at University Hospital, Charlottesville, December 9-12:

Monday, December 9

9:00-9:30 A. M.—Assembly and registration.

9:30-10:30 A. M.—Sympathetic Ophthalmitis and Tuberculosis of the Globe—Dr. Bernard Samuels, Surgeon and Pathologist, New York Eye and Ear Infirmary, and Dr. E. Burchell, Director Eno Laboratory, New York Eye and Ear Infirmary, New York.

10:35-11:35 A. M.—Ocular Manifestations of Congenital Syphilis—Dr. Alan C. Woods, Ophthalmologist-in-Chief, Johns Hopkins Hospital, Baltimore.

11:40 A. M.-12:40 P. M.—Surgical Correction of Eye Muscle Errors—Dr. A. D. Ruedemann, Cleveland Clinic, Cleveland, Ohio.

1:00-2:00 P. M.—Lunch.

2:00-3:00 P. M.—Hysterical Amblyopia with Reference to Confused Diagnosis—Dr. S. Judd Beach, Ophthalmologist, Maine Eye and Ear Infirmary, Portland, Maine.

3:05-4:05 P. M.—Pathological Conditions of the Fundus Seen with the Ophthalmoscope—Dr. Bernard Samuels and Dr. E. Burchell.

4:10-5:10 P. M.—Ocular Manifestations of Acquired Syphilis—Dr. Alan C. Woods.

Tuesday, December 10

9:00-10:00 A. M.—Treatment of Cataract—Dr. A. D. Ruedemann.

10:05-11:05 A. M.—Routine Examination of the Eye—Dr. S. Judd Beach.

11:10 A. M.-12:10 P. M.—Perforating Wounds of the Globe—Dr. Bernard Samuels and Dr. E. Burchell.

1:15-2:00 P. M.—Lunch.

2:00-3:00 P. M.—Ocular Brucellosis—Dr. Alan C. Woods.

3:05-4:05 P. M.—Full Eye Plastic Implant—Dr. A. D. Ruedemann.

4:10-5:10 P. M.—Refraction—Dr. S. Judd Beach.

6:30 P. M.—Banquet Farmington County Club.

Wednesday, December 11

9:00 A. M.—Registration.

9:30-10:30 A. M.—Anatomy of the Temporal Bone, illustrated by lantern slides and anatomical specimens—Dr. Edgar B. Burchell, The Eno Laboratory, New York Eye and Ear Infirmary, New York City.

10:45-11:45 A. M.—Rhinoplastic Submucous Resection—Dr. Dean M. Lierle, Professor of Otolaryngology and Oral Surgery, University of Iowa, Iowa City.

12:00-1:00 P. M.—Carcinoma of the Larynx and Hypopharynx: Irradiation and Surgical Concepts—Dr. Gabriel Tucker, Professor of Broncho-Esophagology, Graduate School, University of Pennsylvania, Philadelphia.

1:00-2:00 P. M.—Luncheon.

2:00-3:00 P. M.—Plastic Surgery of the Ear: Fundamental principles and Technic—Dr. John Marquis Converse, New York City.

3:15-4:15 P. M.—The Lymph Pump Mechanism of the

Nose and Para-Nasal Sinuses—Dr. J. M. Robison, Professor of Otolaryngology, University of Texas Medical School, Houston, Texas.

4:30-5:30 P. M.—Anatomy of the Nose and Sinuses—Dr. Edgar B. Burchell.

THURSDAY, DECEMBER 12

9:00 A. M.—Registration.

9:30-10:30 A. M.—The Application of Local Pressure to the Mucosa of the Maxillary Sinus—Dr. J. M. Robison.

10:45-11:45 A. M.—Plastic Surgery of the Nose: Fundamental Principles and Technic—Dr. John Marquis Converse.

12:00-1:00 P. M.—What Criteria Should be Used in Recommending the Purchase of a Hearing Aid? and the Present Status of Hearing Surveys in the Public Schools—Mr. J. M. Mullendore, Assistant Professor of Speech Education and Director of the Speech Clinic, University of Virginia, Charlottesville.

1:00-2:00 P M.—Luncheon.

2:00-3:00 P. M.—Obstructive Dyspnea: Bronchoscopic Aid in Diagnosis, Treatment, and Tracheotomy—Dr. Gabriel Tucker.

3:15-4:15 P. M.—Histo-Anatomy and Physiology of the Middle Ear Tract—Dr. Dean M. Lierle.

4:30-5:30 P. M.—Roentgenograms of the Skull of Interest to the Otolaryngologist—Dr. Francis H. McGovern, Danville, Dr. George Cooper, Jr., Associate Professor of Roentgenology, University of Virginia, and Dr. G. Slaughter Fitz-Hugh, Assistant Professor of Otolaryngology, University of Virginia.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President ..... MRS. J. E. HAMNER, Petersburg
President-Elect ..... MRS. J. L. DECORMIS, Accomac
Recording Secretary ..... MRS. M. H. HARRIS, West Point
Corresponding Secretary, MRS. MEADE EDMUNDS, Petersburg
Treasurer ..... MRS. REUBEN SIMMS, Richmond

Annual Meeting.

The twenty-fourth annual meeting of the Woman's Auxiliary to the Medical Society of Virginia was held Tuesday, October 15th, at the Cavalier, Virginia Beach, with Mrs. Peyton Moncure Chichester of Richmond presiding. There were about seventy-two members and guests at the annual luncheon, at which guest speakers were Mrs. J. D. Hamer of Phoenix, Arizona, president of the Auxiliary to the American Medical Association, Mrs. W. W. Potter of Concord, Tennessee, president of the Auxiliary to the Southern Medical Association, Dr. Julian L. Rawls of Norfolk, president and Mr. Henry S. Johnson of Richmond, director of Public Relations and Medical Service of the Medical Society of Virginia.

Mrs. H. F. Dormire of Virginia Beach was chairman of local arrangements, with Mrs. C. M. McCoy of Norfolk as co-chairman.

Mrs. J. E. Hamner of Petersburg was installed as president at the close of this meeting, and the following officers were elected to serve with her: president-elect, Mrs. J. L. DeCormis, Accomac; vice-presidents, Mrs. Robert Hightower, Alexandria, Mrs. Roy Upchurch, Danville, Mrs. Southgate Leigh, Jr., Norfolk, and Mrs. A. G. Shetter, Richmond; recording secretary, Mrs. M. H. Harris, West Point; corresponding secretary, Mrs. Meade Edmunds, Petersburg; treasurer, Mrs. Reuben F. Simms, Richmond; parliamentarian, Mrs. E. Latane Flanagan, Richmond; and historian, Mrs. H. A. Latane, Alexandria.

Auxiliary to Richmond Academy of Medicine.

At the September luncheon meeting of this Auxiliary, the following officers were installed by the parliamentarian, Mrs. E. L. Flanagan: Dr. Matilda Chalkley, president; Mrs. L. C. Brawner, president-elect; Mrs. G. D. Vaughan, vice-president; Mrs. Edgar Childrey, treasurer; Mrs. W. A. Young, recording secretary; Mrs. L. J. Buis, corresponding secretary; Mrs. E. S. Ray, assistant; Mrs. B. L. Randolph, historian; and Mrs. E. L. Flanagan, parliamentarian.

The president announced the appointment of the following committee chairmen: *Social,* Mrs. T. F. Wheeldon; *membership,* Mrs. A. G. Shetter; *Publicity,* Mrs. W. R. Morton; *Public Relations,* Mrs. E. L. Flanagan; *Personal Relations,* Mrs. R. F.

Simms; *Philanthropic*, Mrs. E. C. Matthews (Crippled Children's Hospital); and Mrs. E. S. Ray (T. B. Clinic).

The president announced the donation of $500 to Sheltering Arms Hospital. This amount was the proceeds from a benefit bridge party given in May, and would enable the hospital to reopen the children's ward.

MYRTLE G. MORTON (MRS. W. R.)
Publicity Chairman

Auxiliary to the Northampton-Accomac Medical Societies.

This Auxiliary held its regular quarterly meeting on October 8th, as guests of Mrs. John Wise Kellam at her attractive cottage at Silver Beach, with fifteen members and one guest present.

A delightful luncheon and social period preceded the business meeting, at which Mrs. S. S. Kellam of Cape Charles presided. She reported 29 members for the eleventh year of the Auxiliary, two of whom, Mrs. W. Carey Henderson and Mrs. J. L. DeCormis are State Officers.

A letter was read by the treasurer, Mrs. J. H. Hiden, from Mrs. Fletcher J. Wright of Petersburg, thanking the Auxiliary for its contribution to the Leigh-Hodges-Wright Memorial Fund, stating that there was a young physician at Blue Ridge receiving this aid at present.

The sum of one hundred and fifty dollars was put aside toward the Memorial Fund in memory of the late Grace Wilkins Holland, former State President and charter member of the Auxiliary. Mrs. S. K. Ames of Cape Charles was appointed Chairman for this fund.

The Program for the Twenty Fourth Annual State Meeting at Virginia Beach on October 15th was announced, with Mrs. J. L. DeCormis, of Accomac, State Officer, who will present the President's report of the Auxiliary for the year 1946, representing this auxiliary.

"The Doctor's Wife," an address to the Woman's Auxiliary to the American Medical Association, by a former President, Dr. Rock Sleyster, was read.

The following slate of officers for the coming year was then presented to the Auxiliary, and they were elected as a whole: President, Mrs. B. N. Mears, Belle Haven; vice-president and president-elect for 1948, Mrs. S. K. Ames, Cape Charles; treasurer, Mrs. J. Walker Jackson, Machipongo; secretary, Mrs. Jno. W. Robertson, Onancock; and recording secretary, Mrs. Holland Trower, Eastville.

The retiring president, Mrs. S. S. Kellam then submitted her yearly report and presented the gavel to Mrs. S. K. Ames, the Vice-President and President-elect for 1948, in the absence of the incoming president, Mrs. B. N. Mears. A message was read from Mrs. Mears asking that the same Committee Chairmen be appointed to serve with her for the incoming year.

Mrs. E. W. P. Downing then recited a poem in honor of the retiring president, Mrs. Kellam.

A new member, Mrs. C. T. Garcia of Cape Charles, was welcomed into the Auxiliary.

At the January meeting, the Auxiliary will be the guests of Mrs. J. Walker Jackson of Machipongo.

CATHERINE R. TROWER.
(MRS. HOLLAND)
Chairman, Press and Publicity.

New Books.

Among the recent additions to the Library of the Medical College of Virginia are:

Allen—Perifual vascular diseases.
Bauer—Health education of the public.
Berens—Diagnostic examination of the eye.
Bochner—The clinical application of the Rorschoch test.
Brain—Recent advances in neurology and neuro-psychiatry.
Elwyn—Diseases of the retina.
Goldring—Experimental hypertension.
Green—Currents in biochemical research.
Hamilton—Industrial toxicology.
Hill—Anatomy of the head and neck.
Katz—Exercises in electrocardiographic interpretation.
Klapman—Group psychotherapy: theory and practice.
MacKee—X-ray and radium in treatment of diseases of the skin.
Pillmore—Clinical radiology.
Soskin—Carbohydrate metabolism.
Stone—The diagnosis and treatment of pulmonary tuberculosis.
Ward—New worlds in medicine.
Williams—What to do about vitamins.

EDITORIAL

New President
Medical Society of Virginia

OUR incoming President was born in Winchester, Virginia, on August 31, 1876, and at the present time plays an excellent game of tennis. These two facts certainly indicate he is now seventy years young and active.

Dr. William Leven Powell first attended the public schools of his birthplace, but as his father was a civil engineer and was later employed in the State of Washington,

WILLIAM LEVEN POWELL
President, Medical Society of Virginia

Dr. Powell entered Withworth College of that state. His father (born in Loudoun County, Virginia) and his mother (formerly Miss Magill of Winchester, Virginia) were both Virginians. When the Powell family returned to the Old Dominion, our new President was entered in Miller's School at Crozet, Virginia, where he remained until 1896 when he started his medical career as a student in the Medical Department of the University of Virginia. He received his M.D. from the University of Virginia in 1900. He then began an extensive and varied hospital training.

While at the University he was a member of the Alpha Tau Omega academic fraternity and the Pi Mu honorary medical fraternity. He also belonged to several of the many other honorary social societies. To the writer's personal knowledge, he was generally considered to be one of the most popular students in the University. He

acquired this reputation due to his friendly personality and consideration of others. Such has remained characteristic of him even after many years of extensive medical experience.

After leaving the University of Virginia, Dr. Powell spent one year in Saint Anne's Infant and Maternity Hospital, Cleveland, Ohio; sixteen months in the State Hospital, Warren, Pennsylvania; eighteen months as an interne in the Polyclinic Hospital, Philadelphia, Pennsylvania; and then six months as resident in the Philadelphia Hospital.

Following this valuable hospital experience, he located in Roanoke, Virginia. During his first two years in this city, he was resident in the Roanoke Hospital. While resident in this hospital, Dr. Powell made many friends among the doctors of this vicinity, which had contributed somewhat to his having acquired and retained a very extensive practice.

He was a captain in the Medical Department of the U. S. Army during World War I. During World War II he was Representative for the Sixth Congressional District of Virginia for the Procurement and Assignment Service for Physicians of the War Manpower Commission. He also volunteered to assist in helping with the thousands of physical examinations which were made by the local Induction Station and remained "on call" for any emergency which might have arisen in such examining centers. In other words, he has more than met the military obligations naturally assumed by all true and loyal American physicians.

He is now Director of the Out-patient Clinic and Chairman of the Executive Committee of the Roanoke Hospital, and as such is of great assistance to the present house officers of that institution.

In 1907 he married Miss Eleanor Kerr of Philadelphia. They had two sons, Randolph now living in Charlotte, North Carolina, and Leven, Jr. who died in 1926. Dr. Powell has been President of the Roanoke Academy of Medicine, is a member of the Southern Medical Association, American Medical Association, Southwestern Virginia Medical Society, etc. He has been a member of the Council of the Medical Society of Virginia for many years. He was formerly a member of the Kiwanis Club. Roanoke County Chapter, but resigned when he found the frequent meetings of the various organizations interfered too greatly with his tennis and fishing activities to which he is devoted.

He has contributed greatly to his community by his active interest in the Community Fund, Chamber of Commerce, etc. However, his greatest contribution to this section of the State is one he has made without his realizing that he was making the same. When Dr. Powell started to practice in Roanoke there existed in this city many "medical factions". Many doctors were not even on speaking terms with each other and only a few making even slightly kindly remarks concerning any other member of the medical profession. Now I know of no other city where "harmony reigns more nearly supreme" than in Roanoke. This is largely due to Dr. Powell's personal example. His ever gracious manner toward and consideration of the other members of his profession will prove to be congenial to the membership of the Medical Society of Virginia where good fellowship and friendship has existed for so many years.

H. H. T.

Muddying The Waters

AT Two Harbors on August 15-18, 1946, was born a new organization for the control of medical service. It was named "A Federation of Co-operative Health Plans." At its birth were some two hundred delegates and visitors from twenty or more States, four Provinces of Canada, Hawaii, and Nova Scotia. Group Health of Wash-

ington, D. C., seems to be the Godfather, and Miss Margaret Klein, Statistician of the Social Security Board, the Godmother. For some reason it is not stated who the parents are.

The purpose of this new organization is to promote the management and control of medical care by the consumers. One of its immediate objects seems to be to get the backing of the Farmers' Home Administration, which is the new name for the Farm Security Agency with its enlarged scope. The basic theme of the Co-ops is that medical care belongs to the consumer, and that the producer, i.e. the physician cannot furnish the leadership that the consumer can in the distribution of medical care, and the maintenance of its quality and its character. By the same token, the customers of Miller & Rhoads, Thalhimers, or Montgomery Ward have the right to determine business policies of these concerns—the kinds of goods they sell, and the manner in which they are to be distributed. No doubt there were times in the past four or five years when the management of these concerns would have been glad to have found someone to take over, but it is certain that the customers would now be in a pretty mess had they done so. As the matter now stands, Messrs. Murray, Dingell, Wagner, Pepper, and Truman want the Federal Government to take over the practice of medicine. This new organization wants the customers to run it. Mr. John L. Lewis has already taken charge of that part of the practice of medicine that has to do with the miner and his family. All agree that the doctor furnishes a very necessary commodity, i.e. medical service, but none thinks he is able to manage his own affairs. All, in their effort to talk themselves into power, stress preventive medicine, but none recognizes that in every State in the Union there is a Health Department anxious to furnish the people all the preventive medicine and honest-to-goodness scientific, preventive medicine that the taxpayers are willing to pay for.

Podagra

IN 208 A.D. the Emperor Severus brought the gout with him to Britain when he came to subdue an uprising in the North. He was so incapacitated that he had to be carried on a litter. Neither he nor the disease ever left the Island. The emperor died at York at the age of 65 years; the disease is still rampant (unless the food shortage incident to World War II has curbed it). We still think of it as a British disease. The dietary habits of the seventeenth and eighteenth centuries in England made it a common disease and the satirists and cartoonists popularized its physiognomy, if a disease may be said to have such. The great Sydenham was the first adequately to describe the disease clinically and his description is a classic, but Rowlandson, Cruikshank and Hogarth popularized its grotesque features.

Much of Sydenham's description is still current. He said "Either men will think that the nature of gout is wholly mysterious and incomprehensible, or that a man like myself, who has suffered from it thirty-four years, must be of a slow and sluggish disposition not to have discovered something respecting the nature and treatment of a disease so peculiarly his own. The difficulties and refinements relating to the disease itself, and the method of its cure, I will leave for Time, the guide to truth, to clear up and explain." He then goes on to tell of the type of persons affected and describes the character of an attack in a most realistic manner. He picks the adjective exquisite in describing the pain, and says that it is so exquisite that the weight of the sheet renders it intolerable. The night is passed in torture, sleeplessness, turning of the affected part, and perpetual change of posture, the tossing about of the body being as incessant as the pain of the tortured joint. Both Sydenham and the cartoon-

ists noted the associated bad temper. In paragraph 15 Sydenham displays his philosophic mind: "For humble individuals like myself, there is one poor comfort, which is this, viz. that gout, unlike any other disease, kills more rich men than poor, more wise men than simple. Great kings, emperors, generals, admirals, and philosophers have all died of gout. Hereby Nature shows her impartiality: since those whom she favors in one way she afflicts in another—a mixture of good and evil pre-eminently adapted to our frail mortality."

The familiar quotation that more wise men than fools have the disease, commonly ascribed to Sydenham, probably explains why the disease is rarely seen in America now. But is it as rare as we think? May there not be atypical forms of gout that go unrecognized? The editor knows one family in which there were four cases of gout in two generations. None of the afflicted were related by blood to one another. However, they lived in the same house and had the same cook.

Floral Eponym

WITHERINGIA

WILLIAM WITHERING, 1741-1799.

WILLIAM WITHERING, who has the distinction of introducing a valuable remedy into medicine and of formulating rules for its use that are still in use, was born in Wellington, Shropshire, England. His father, Edmund was a successful physician. His mother, Sarah Hector, belonged to a well known medical family. Her father, Dr. George Hector, officiated at the birth of Dr. Samuel Johnson. Withering graduated M.D. at Edinburgh in 1766. When he was a medical student he showed an aversion to Botany, but when he came to practice at Stafford one of his first patients (she afterwards became his wife) was interested in flower painting. During her convalescence, Withering gathered plants for her to use as models. Eight years later appeared the first volume of his great work on Botany, "A botanical arrangement of all vegetables naturally growing in Great Britain, with descriptions of all the genera and species." The fourth and last volume appeared in 1796. After his death three editions were published. In 1775 his opinion was asked concerning an old family recipe for the cure of dropsy which had long been kept secret by an old woman in Shropshire. It contained some twenty ingredients, but it was evident that the active herb could be no other than foxglove. Withering began to experiment with the drug. The turkey was his "guinea pig." In 1779 Dr. Stokes reported the results of Withering's experiments to the Medical Society at Edinburgh and in 1783 digitalis was included in the Edinburgh Pharmacopoeia. His book, which is now of great rarity, "The foxglove, and some of its medical uses, 1785" was written to correct some of the abuses that had already begun to creep in in the use of this valuable remedy. Withering moved to Birmingham where he attained great success. He was also a mineralogist and chemist of note and made valuable observations in the treatment of tuberculosis, a disease of which he died in 1799. When he was on his death bed, someone remarked "The flower of English physicians is indeed Withering." The French botanist, L'Heritier de Brutelle had already named a genus of plant in his honor and this flower is sculptured on the left side of his black marble tombstone in Edgeaston Old Church.

Witheringia does not appear in any botanical work at my disposal. Norman Taylor, Editor of The Garden Dictionary, writes me as follows: "Unfortunately for your floral eponyms *Witheringia* has been used by two different authorities, the first one by L'Herit. Sert. Ang. 1.33. t L (1788). That genus is no longer maintained, being now referred to as *Bassovia* in the Solanaceae. Apparently in ignorance of this fact,

but again to commemorate William Withering, Miers in Ann. & Mag. Nat. Hist. Ser. II. iii. (1849) 145, described the genus *Witheringia*. That genus is also a synonym and is now referred to as *Althenaea* which also belongs to the Solanaceae."

NOTE: Withering had four tenuous but interesting American connections. 1. A fellow student at Edinburgh was Walter, a Virginian who became a physician of note and a member of the House of Burgesses. 2. His removing to Birmingham was occasioned by the death of Dr. Small who had once been professor of natural philosophy at William and Mary College. Withering succeeded both to Dr. Small's practice and to his membership in the famous Lunar Society. 3. Benjamin Franklin, who was sometimes a guest of the Lunar Society, wrote to him from Paris for his cure of the stone. 4. Dr. Osler gave a collection of Withering's letters to the Royal Society of Medicine in London.

SOCIETIES

Southwestern Virginia Medical Society.

The annual Fall meeting of this Society was held at the Governor Tyler Hotel, Radford, on October 3rd, under the presidency of Dr. A. P. Jones of Roanoke. The afternoon program included the following papers:

Lesions of the Esophagus and Stomach from X-Ray Standpoint—Charles H. Peterson, M.D., Roanoke.

The Management of Infants and Children with Allergic Problems—W. Ambrose McGee, M.D., Richmond.

Public Relations—Henry S. Johnson, Director of Public Relations, Medical Society of Virginia.

The Principles and Objectives of the Association of American Physicians and Surgeons—Harry E. Northam, Chicago.

Between the afternoon and evening sessions, there was a Cocktail Hour and Banquet at the Hotel, as also a business session. There was an attendance of 55 at the afternoon session and approximately 100 at the banquet.

After the banquet, the guest speakers gave their papers:

Carotid Sinus Syndrome with Surgical Treatment: Case Reports—J. M. Emmett, M.D., Clifton Forge.

Choice of Obstetrical Instruments—Edward H. Dennen, M.D., New York.

Dr. Jones, President, made a short talk.

At the business session, several doctors were admitted to membership and officers were elected for the coming year: President, Dr. Charles F. Graham of Wytheville; Vice-President, Dr. Douglas Vance of Bristol; and Secretary-Treasurer, Dr. A. F. Giesen of Radford, re-elected.

Dr. W. C. Caudill of Pearisburg was appointed to the Judiciary Committee to fill a vacancy, and Dr. T. L. Gemmill of Radford was elected to the Executive Committee, the other members being Dr. R. M. DeHart of Radford, chairman, and Drs. W. A. Porter of Hillsville, A. P. Jones of Roanoke, and Beverley F. Eckles of Galax.

The Spring meeting will be held in the first week of May, 1947, the place of meeting probably being Marion.

The Bedford County Medical Society

Was entertained at a dinner meeting on the evening of October the 18th by the Bedford Pharmacists. The guest speaker was Dr. R. Blackwell Smith, assistant dean of Pharmacy at the Medical College of Virginia, who gave an interesting talk on "Some Methods of Providing Medical Care for All Our Citizens". Dr. J. G. Jantz and Dr. W. G. Hardy, both of Bedford, are president and secretary, respectively, of the Society.

Louisa County Medical Society.

This Society, at its meeting on September 24, named Dr. H. S. Daniel of Louisa as its delegate to the State Society meeting. Dr. E. B. Pendleton of Cuckoo was elected president and Dr. J. Langdon Moss, who recently located in Louisa, was elected secretary.

The Lynchburg Academy of Medicine

Held its regular monthly meeting on September 16th at the Lynchburg General Hospital, under the presidency of Dr. Edwin A. Harper. After a short business session, Dr. Charles E. Troland of the Medical College of Virginia, Richmond, presented a very interesting and informative paper on "Present Day Concept of Herniated Intervertebral Disc." The paper was enjoyed by all and several questions were asked by various members to which Dr. Troland gave detailed answers.

H. W. HOLLINGSWORTH, *Secretary*

NEWS

The State Meeting.

The annual meeting of the Medical Society of Virginia at the Cavalier, Virginia Beach, October 14-16, under the presidency of Dr. Julian L. Rawls of Norfolk, was well attended and was in every way a great success. Minutes of the meeting will appear in the December *Monthly*. As a matter of immediate interest, however, Dr. W. L. Powell of Roanoke was inducted as president at the closing session. Other officers are: President-elect, Dr. Guy Fisher of Staunton; vice-presidents, Dr. A. Brownley Hodges, Norfolk, Dr. Carrington Williams, Richmond, and Dr. W. C. Akers, Stuart; executive secretary-treasurer, Agnes V. Edwards, Richmond. Drs. C. L. Harrell of Norfolk, Jas. L. Hamner of Mannboro, and J. E. Knight of Warrenton were named to succeed themselves as councilors, with Dr. W. R. Whitman of Roanoke as the only new councilor. Dr. J. Morrison Hutcheson and Dr. Carrington Williams, both of Richmond. were re-elected as delegate and alternate-delegate to the American Medical Association.

It was voted to hold the 1947 meeting at the Hotel Roanoke, Roanoke, dates to be announced later.

Special Society Meetings.

Several special societies held their annual meetings at the time of the State meeting and elected officers for the coming year. They are:

VIRGINIA OBSTETRICAL AND GYNECOLOGICAL SOCIETY

President: Dr. L. L. Shamburger, Richmond; vice-president, Dr. Walter McMann, Danville; secretary-treasurer, Dr. W. D. Suggs, Richmond.

VIRGINIA ORTHOPEDIC SOCIETY

President, Dr. James T. Tucker, Richmond; vice-president, Dr. George A. Duncan, Norfolk; secretary-treasurer, Dr. H. H. Wescott, Roanoke.

VIRGINIA PEDIATRIC SOCIETY

President, Dr. Paul Hogg, Newport News; vice-president, Dr. Charles P. Brown, Norfolk; secretary-treasurer, Dr. Louise Galvin, Richmond.

VIRGINIA RADIOLOGICAL SOCIETY

President, Dr. Vincent W. Archer, Charlottesville; vice-president, Dr. R. A. Davis, Newport News; secretary-treasurer, Dr. Philip B. Parsons, Norfolk.

VIRGINIA SOCIETY OF PATHOLOGY AND LABORATORY MEDICINE

President, Dr. M. B. Beecroft, Newport News; vice-president, Dr. Lawrence J. Motyca, Norfolk; secretary-treasurer, Dr. M. L. Dreyfuss, Clifton Forge. Dr. J. H. Scherer, Richmond, was recommended as councilor from Virginia to the American Society of Clinical Pathologists.

VIRGINIA UROLOGICAL SOCIETY

President, Dr. W. W. S. Butler, Roanoke; vice-president, Dr. Charles M. Nelson, Richmond; secretary-treasurer, Dr. W. W. Koontz, Lynchburg.

VIRGINIA SECTION, AMERICAN COLLEGE OF PHYSICIANS

Chairman, Dr. Charles M. Caravati, Richmond; secretary, Dr. J. F. Waddill, Norfolk. Dr. J. Edwin Wood, Jr., Charlottesville, is the Governor for Virginia.

News from the University of Virginia, Department of Medicine.

Dr. Oscar Swineford, Jr., Professor of Practice of Medicine, has been appointed Branch 4 Area Consultant in Allergy for the Veterans Administration for Virginia, West Virginia, North Carolina, Maryland, and the District of Columbia.

Mr. Edward R. Stettinius, Rector of the Board of Visitors of the University, has been appointed to the Board of Trustees of the American Allergy Fund. Dr. Oscar Swineford, Jr., is a member of the Medical Board of Trustees, and Dr. William Henry Sebrell of the United States Public Health Service, is a member of the Scientific Advisory Council.

On October 3rd, Dr. Oscar Swineford, Jr., spoke in Johnson City, Tennessee, to the County Medical Society on "The Management of Asthma". On October 11th, he took part in an orientation course in Allergy, conducted by the Marquette University Medical School under the sponsorship of the American Academy of Allergy, and lectured on "The Diagnosis and the Classification of Asthma", "Physical Allergy", and "Cardiac Asthma".

Dr. Fletcher D. Woodward, Professor of Otolaryngology, will participate in the program of the Pan American Congress of Otolaryngology in Chicago on October 18th.

Cancer Control Is a Major Health Program.

The Joint Committee on Health Problems in Education of the National Education and American Medical Associations, meeting at Chicago in May, 1946, adopted the following statement, and authorized its publication:

Cancer control is a major health problem in the United States. As such, it merits attention not only in programs of research, but also in programs of education. Instruction concerning the nature of cancer and known methods of prevention and control should be included in the high school course of study, along with other important health problems facing the American people today. High school students are interested in such information. Scientific facts should be taught to them so that fears may be allayed, intelligent action as future adults be promoted, and families favorably influenced by the information which students relay to adult relatives.

The American Gynecological Society

Has set dates for its next meeting as June 17, 18 and 19. This will be held under the presidency of Dr. Norris W. Vaux of Philadelphia at Seignoiry Club, Monte-Bello, Quebec. Further information may be obtained from the secretary, Dr. Norman Miller of Ann Arbor, Michigan.

Dr. Wiley D. Lewis,

Formerly at St. Albans Sanatorium, Radford, is now on the staff of the Highland Hospital, Asheville, North Carolina.

Dr. T. E. Stanley

Formerly located at Beaverdam in Hanover County, is now with the Newton D. Baker Hospital, Martinsburg, West Virginia.

Changes at Saint Albans Hospital.

Dr. Daniel D. Chiles, recently of Orchard Park, New York, is now affiliated with this hospital. He is a graduate of Vanderbilt University, class of 1938, and for the past seven years has served as a psychiatrist for the United States Public Health Service.

Dr. Joseph M. Dixon of Roanoke has also recently become associated in the work.

Dr. A. I. Dodson,

Richmond, was one of the guest speakers at the meeting of the Medical Society of the State of Pennsylvania on October 8th. He was also recently appointed as a member of the editorial board of the Quarterly Review of Urology, published in Washington.

Dr. John S. Howe

Resigned as professor of pathology at the Medical College of Virginia, effective September 1st, to accept an appointment as pathologist and director of laboratories at the Methodist Hospital, Brooklyn, New York.

Dr. B. M. Kagan,

Who practiced in Richmond prior to entering the Service, has located in Chicago where he has taken the position of Director of Pediatric Research at the Michael Reese Hospital.

Dr. Norman G. Patterson,

Who practiced for several years at the Clinch Valley Clinic in Richlands, has moved to Bristol, Tenn., where he has offices in the Electric Power Building. He will specialize in surgery and gynecology.

Campaign to Combat Heart Disease.

The initiation of a nationwide program of public education and information on diseases of the heart has been announced by officials of the American Heart Association. According to Dr. Howard F. West of Los Angeles, President of the Association, the program will have as its prime purpose "the dissemination of educational information to the public in a broad effort to retard the rapid increase of heart disease throughout the nation." It is estimated that there are more than 4,000,000 people in the United States today who have heart disease. There were more deaths from heart disease than from the total of the five other leading causes in 1944, and heart diseases are responsible for an annual loss of more than 100,000,000 work days.

The educational campaign of the Association will reach its climax during National Heart Week to begin on February 9, 1947.

Dr. William Branch Porter, Richmond, is one of the directors of the American Heart Association.

Congress on Obstetrics and Gynecology.

The Third American Congress on Obstetrics and Gynecology will be held September 8-12, 1947, in the Municipal Auditorium in St. Louis, Missouri. Dr. Fred L. Adair of Chicago is General Chairman.

Southeastern Allergy Association.

The second annual meeting of this Association will be held January 18th and 19th, 1947, at The Atlanta-Biltmore Hotel, Atlanta, Georgia. Dr. Hal McCluney Davison, Atlanta, is president; Dr. Warrick Thomas, Richmond, vice-president; and Dr. Katherine Baylis MacInnis, Columbia, South Carolina, secretary-treasurer.

Hotel reservations should be made directly with the hotel.

Dr. Paul J. Bundy,

Recently of Dante, has moved to Mountain City, Tennessee, where he is engaged in general practice.

Protect Your Future—Buy Your Extra Bonds Now

Is the slogan of a campaign from November 11 to December 7, to urge Americans to take an extra step toward financial security—individual security, community business advancement, and national prosperity—by the purchase of EXTRA U. S. Savings Bonds now.

Dr. Nat Wooding

Announces his separation from Service with the U. S. Army Medical Corps and the opening of his office for the general practice of medicine at Halifax. He graduated from Long Island College of Medicine in 1943 and, after internship at the Medical College of Virginia Hospitals, was at two general hospitals and later at a Station Hospital where he was engaged in neuropsychiatry.

Scientific Exhibit—American Medical Association.

At the Centennial Session of the American Medical Association to be held in Atlantic City, June 9 to 13, 1947, the Scientific Exhibit will include both the history of medicine during the past century and the latest developments of medical science.

Application blanks for space are now available. All applicants must fill out the regular form. Applications close on January 13, 1947, after which time the Committee on Scientific Exhibit will make its decision and notify the applicants.

Application blanks for space should be procured as soon as possible. They are available from The Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

Post-Graduate Course in Ophthalmology and Otolaryngology.

The annual post-graduate course in Ophthalmology and Otolaryngology will be held at the University of Virginia Hospital, Charlottesville, December 9-12, inclusive, the first two days being given to Ophthalmology and the last two to Otolaryngology so that anyone interested in only part of the course may arrange accordingly. Information as to fees and other details, may be secured from Dr. Fletcher D. Woodward, Box 98, Charlottesville, Va. Program for this course is published in the Forum of this issue of the MONTHLY.

Dr. John W. Martin,

Formerly of Roanoke Rapids, North Carolina, has located at Yorktown. He is an alumnus of the Medical College of Virginia.

Dr. Ben L. Boynton,

Formerly of Norfolk, is now Director of Physical Medicine at the West Texas Memorial Hospital in San Angelo.

Dr. Gordon Willis Jones,

Class of '40, Johns Hopkins University Medical School, recently returned from Service, announces the opening of an office in the Professional Building, Fredericksburg. His practice will be limited to the field of obstetrics and gynecology.

Resigns as Richmond Health Director.

Dr. Jack B. Porterfield has tendered his resignation as director of the Department of Health of the City of Richmond, effective November 15. He will be succeeded by Dr. Charles Howe Eller, now connected with the faculty of Johns Hopkins Medical School. Dr. Eller is not a stranger here, having been a former director of Rural Health with the State Health Department and also health officer for Charlottesville and Albemarle County.

Fourth Refresher Course in General Medicine

The Fourth Refresher Course in General Medicine was held at the Medical College of Virginia, September 9-21, 1946. This was the last of four such courses sponsored by the Medical Society of Virginia, and given alternately every three months by the University of Virginia and the Medical College of Virginia.

Throughout each day of the two weeks, there were lectures, clinics, and ward rounds by members of the faculty. The program on September 13, was presented by members of the staff of the Veterans Administration Hospital.

The evening sessions were given over to invited guest speakers, as follows: Dr. John H. Dingle, Western Reserve University School of Medicine, "Influenza" and "Primary Atypical Pneumonia"; Dr. E. C. Drash, University of Virginia School of Medicine, "Surgery of Pulmonary Tuberculosis"; Dr. Walter Kempner, Duke University School of Medicine, "The Rice Diet in Hypertension and Nephritis"; Dr. L. J. Roper, State Commissioner of Health, "Recent Legislation Involving Activities of the State Department of Health"; Dr. Joseph F. Ross, Boston University School of Medicine, "Radioactive Isotopes and Their Application to Medical Investigation" and "Therapeutic Applications of Artificial Radioactivity"; and Dr. Robert Ross, Duke University School of Medicine, "Female Endocrinology".

Thirty physicians enrolled in and attended the course. Of these, nineteen were Veterans, ten were in the Veterans Administration, and one was a civilian doctor.

National Gastroenterological Association 1947 Award Contest.

The Association has announced its Annual Cash Prize Award Contest for 1947. One hundred dollars and a Certificate of Merit will be given for the best unpublished contribution on Gastroenterology or allied subjects. Certificates will also be awarded those physicians whose contributions are deemed worthy.

Contestants residing in the United States must be members of the American Medical Association. Those residing in foreign countries must be members of a similar organization in their own country.

The decision of the judges will be final. The Association reserves the exclusive right of publishing the winning contribution, and those receiving certificates of merit, in its Official Publication, *The Review of Gastroenterology*. All entries for the 1947 prize should be limited to 5,000 words, be typewritten in English, prepared in manuscript form, submitted in five copies, accompanied by an entry letter, and must be received not later than April 1, 1947. Entries should be addressed to the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

Married.

Dr. DeArmond Moore, Charlotte, N. C., and Miss Leona Rose Olander, Pittsburgh, Pa., October 8th. He is a graduate of the Medical College of Virginia in 1945. They will make their home in Richmond.

Lt. (jg) Frederick Victor Vance, Jr., (MC), USNR, Bristol, Tenn., and Miss Ann Lyttelton Waddell, University, October 5th. He is a graduate in medicine from the University of Virginia, class of 1945.

Virginia League for Planned Parenthood.

Dr. H. Hudnall Ware, Jr., Richmond, was re-elected president of the League at its annual meeting in October. Dr. M. Pierce Rucker, Richmond, was re-elected chairman of the medical advisory committee, with the following members: Dr. C. J. Andrews, Norfolk; Dr. B. B. Bagby, Edwardsville; Dr. Dean B. Cole, Richmond; Dr. A. M. Groseclose, Roanoke; Dr. W. R. Payne, Newport News; Dr. F. O. Plunkett, Lynchburg; Dr. H. Hudnall Ware, Richmond; and Dr. T. J. Williams, University.

Dr. John O. McNeel,

Recently located at Marlinton, West Virginia, is now with the Medical Security Clinic in Seattle, Washington. Prior to entering the Service, Dr. McNeel was connected with the University of Virginia Hospital at Charlottesville.

Dr. W. C. Mason,

Formerly of Gordonsville, has accepted a position with the Veterans Administration in the Regional Office, Out-Patient Department, at Roanoke.

Dr. John T. Hazel,

Having completed a Fellowship in General Surgery at the Mayo Clinic, has opened his former office at Wilson Boulevard and Kenmore Street, Arlington.

American Academy of Dermatology and Syphilology.

The fifth annual meeting of the Academy will be held in Cleveland, Ohio, December 7-12, under the presidency of Dr. George M. MacKee, New York City. This will be the first meeting of the group since 1941 and it is expected that more than 1,000 members will attend. There will be extensive

scientific and commercial exhibits held in connection with the meeting, which will feature special lectures by members of the Academy and by famed authorities in such other fields as atomic energy, radiology, and surgery. The Academy is chiefly concerned with teaching and in consequence the entire session will be a sort of "post-graduate" seminar. Dr. Earl D. Osborne, Buffalo, New York, is secretary of the Academy.

Have You Something for Parergon?

The new edition of *Parergon* is now in preparation. If you wish to have any of your art works (oils, watercolors, sculptures, drawings, pastels, prints, etchings, engravings, lithographs, woodblocks, linoleum blocks, photographs, colored photographs, ceramics, woodwork, metalwork, jewelry, needlework, shipmodels) considered for inclusion in the forthcoming edition (over 750 pictures) please mail perfect glossy photo prints (8x10 preferred) immediately by airmail to Editor, *Parergon,* Mead Johnson & Company, Evansville 21, Indiana, U.S. A.—now!

Fairfax Health Officer.

Dr. Thomas Scarlett resigned as Health Officer of Fairfax County, effective October 15, and Dr. Henry C. Bradford, recently returned from Service, was appointed to fill this vacancy.

Dr. George S. Bowers,

Who practiced for a short time in Richmond upon his return from military service, is now associated with Dr. Paul M. Holmes in Toledo, Ohio, with offices at 316 Michigan Street. Their practice is limited to internal medicine and diseases of the chest.

Dr. Arthur Morton Smith

Has recently returned from active duty in the Army, and has reopened his office at 409 National Bank Building, Charlottesville. He will limit his practice to surgery and gynecology.

The American Academy of Allergy

Will hold its annual convention at Hotel Pennsylvania, New York City, November 25-27, inclusive. All physicians interested in allergic problems are cordially invited to attend the sessions as guests of the Academy without payment of registration fee. The program has been arranged to cover a wide variety of conditions where allergic factors may be important. Papers will be presented dealing with the latest methods of diagnosis and treatment as well as the results of investigation and research. Advance copies of the program may be obtained by writing to the Chairman on Arrangements, Dr. Horace S. Baldwin, 136 East 64th Street, New York City, prior to November 10th.

Southern Psychiatric Association.

The annual meeting of this Association was held in Richmond, October 7th and 8th, under the presidency of Dr. Whitman C. McConnell of St. Petersburg, Florida. Dr. Robert H. Felix, Washington, D. C., was installed as president in place of Dr. James K. Hall, Richmond, who resigned on account of illness. Other officers are: vice-president, Dr. J. Asa Shield, Richmond; councilors, Drs. R. Burke Suitt, Durham, N. C., and Guy Witt, Dallas, Texas; and secretary-treasurer, Dr. Newdigate M. Owensby, Atlanta, Ga. (re-elected).

Wanted.

Laboratory Technician. Apply Dr. Snowden C. Hall, Jr., 705½ Main Street, Danville, Virginia. Telephone 3530. (*Adv.*)

Doctor Wanted.

A good, sensible, sober doctor is badly needed in the heart of the beautiful Shenandoah Valley of Virginia. A desirable office in the center of town is available and a hearty welcome and good treatment will be given. Address "Valley of Virginia", care of the MONTHLY. (*Adv.*)

An Appointment in E.E.N. and T.

Available at Raiford Clinic, Franklin. Address the Administrator, Raiford Memorial Hospital, Franklin, Virginia, for further details. (*Adv.*)

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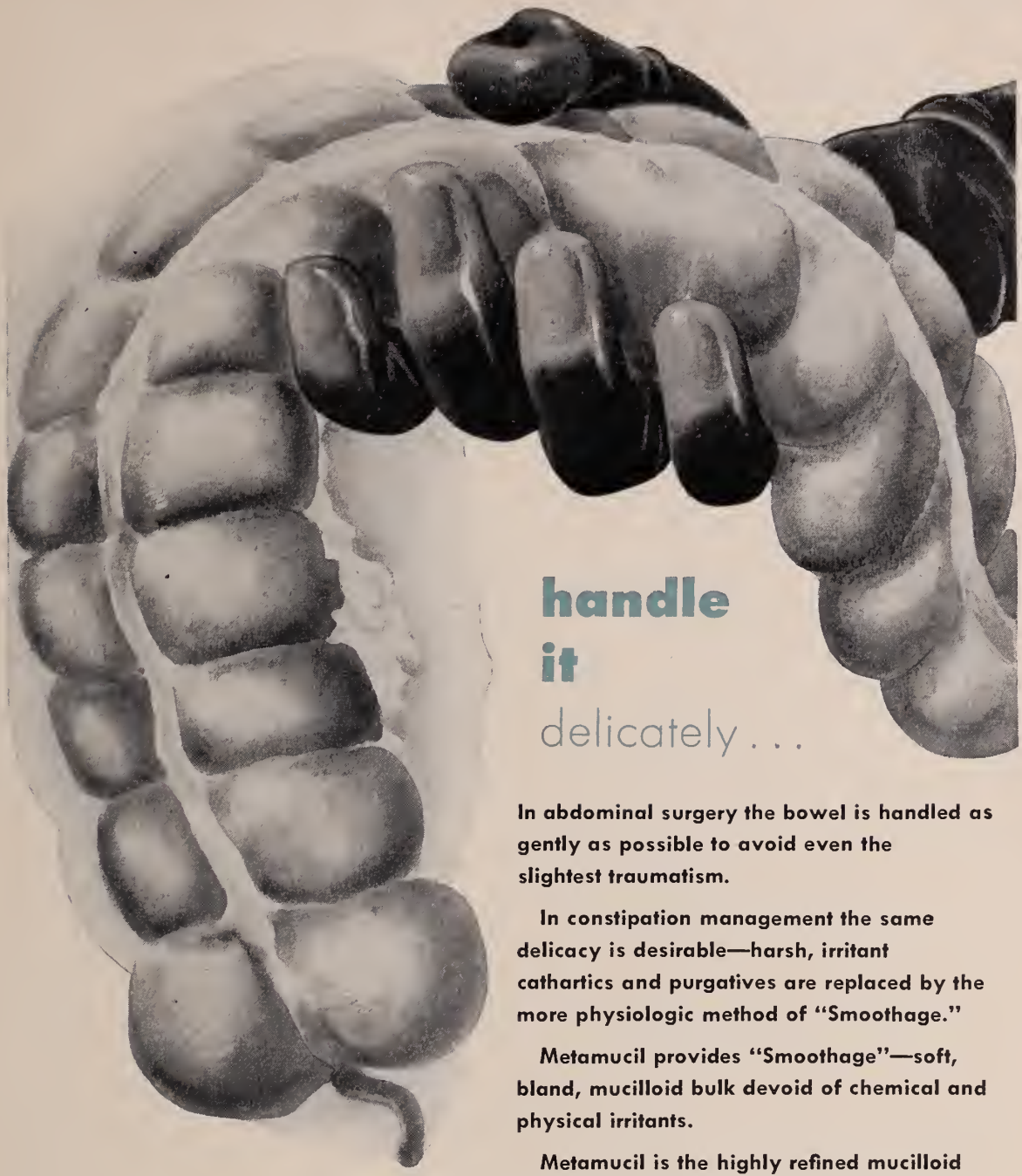
For Sale.

GE X-ray, Model 1775, 30 ma, 85 KVP, table with Bucky. In excellent working condition. James P. King, M. D., Radford, Virginia. (*Adv.*)

Wanted:

An associate in surgery and general practice in a new twenty-seven bed hospital. Also to do some outside general practice. Apply to J. Paul Kent, M. D., Altavista, Virginia. (*Adv.*)



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OBITUARIES

Dr. William Preston Burton,

Prominent surgeon of Covington, was killed in an airplane crash near Christiansburg on October 20th. He and his brother, Dr. Gilbert Burton, a dentist, were on their way to South Dakota for a pheasant shoot. Apparently due to a heavy fog the plane hit a tree which tore off a wing causing it to crash into the mountain. Both doctors and the pilot were instantly killed. Dr. Burton was forty-eight years of age and a graduate of the Jefferson Medical College in 1923. He practiced for some years in Pocahontas County, West Virginia, before moving to Covington, where in 1931 he opened the Covington Hospital. He had been a member of the Medical Society of Virginia for twenty-one years. His wife and a daughter survive him.

Dr. Claudius James Riddick,

Prominent physician of Suffolk, died October 18th. He was eighty-seven years of age and graduated from the Bellevue Hospital Medical College, New York, in 1890. Dr. Riddick had practiced in Suffolk for more than half a century. He was formerly physician for Nansemond County and surgeon for the Virginian Railway. He had been a member of the Medical Society of Virginia for fifty-six years. A daughter and a son survive him.

Dr. Raymond William Paul,

Well known Richmond physician, died September 22nd after an illness of about two weeks. He was fifty-three years of age and graduated from the Medical College of Virginia in 1918. Dr. Paul specialized in proctology and had practiced in Richmond for twenty-seven years. He had been a member of the Medical Society of Virginia since 1920. His wife and two children survive him.

Dr. Robert Edward Timberlake,

Well known Richmond physician, died October 27th. He was fifty-six years of age and a graduate of the Medical College of Virginia in 1914. Dr. Timberlake has been a physician for the Health Department of the City of Richmond for twenty-seven years in addition to having maintained a private practice for more than thirty years. Dr. Timberlake was a member of the Medical Society of Virginia. His wife and three daughters survive him.

Dr. Edward Newton Lillard,

Madison, died October 9th, at the age of seventy-four. He was a graduate of the Medical College of Virginia in 1901. Dr. Lillard had practiced at Stanardsville and Ocean View before locating in Madison about fifteen years ago. He had been a member of the Medical Society of Virginia for forty-five years. His wife survives him.

Dr. Elliott DeJarnette,

Ashland, died October 21st after a long illness, at the age of seventy-three. He received his medical degree from the University of Virginia in 1897 and had practiced for more than forty years in Ashland. A son survives him.

Dr. Richard E. Wilkinson,

McKenney, died September 29th after an illness of more than a month. He was eighty years of age and a graduate of the Medical College of Virginia in 1897. Seven children survive him.

Dr. William Chapman Chilton, Jr.,

Appomattox, died September 20th. He was thirty-three years of age and a graduate of the Medical College of Virginia in 1943. Dr. Chilton served as a captain in the Medical Corps of the United States Army during World War II and only recently returned from Europe.

New and Nonofficial Remedies, 1946. Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1946. Chicago: American Medical Association, 1946. Cloth. Price, postpaid, $1.50. 770 pages.

New and Nonofficial Remedies is the book in which are listed and described the medicinal preparations which the Council on Pharmacy and Chemistry has found acceptable, under its rules, for the use of physicians. To have a product accepted, the manufacturer must declare its composition, give adequate proof of its therapeutic value and market it with claims which have been found valid by the Council. The present volume represents a cumulative epitome of the Council's work since its foundation in 1905.

Accepted preparations are grouped in twenty-four classifications ranging from Allergenic Preparations to Vitamins. Ordinarily, an inclusive general article precedes the description of the various products. The monograph for the products set forth the actions, uses and dosage and usually a set of tests and standards. As its name implies, the book is intended to describe nonofficial preparations, that is preparations which are not included in such official publications as the Pharmacopeia and the National Formulary. However, some official articles are listed and described, these being in general those for which the Council feels the practicing physician needs concise and authorative information. In the preface of the present volume, the Council lists some thirty-five official drugs ranging from acetylsalicylic acid to Strophanthin, which the Council feels it no longer necessary to consider for inclusion in the book.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1945. Chicago: American Medical Association, 1946. 122 Pages. Cloth. Price, postpaid, $1.00.

Originally intended chiefly as a repository of its reports on rejection of preparations found unacceptable for inclusion in New and Nonofficial Remedies or of status reports on products whose therapeutic value has not yet been established, this volume in recent years has been composed mainly of reports giving general information to the physician on the status of various therapeutic agents and therapeutic procedures. Most of these reports have previously been published in The Journal A.M.A. The reports in the present volume emphasize the educational nature of the Council's work and bear witness to its leadership in the consideration of current therapeutic problems.

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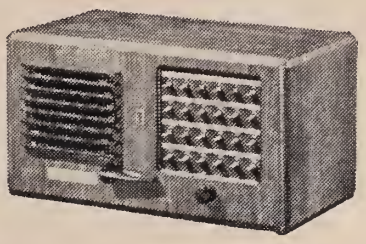

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*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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GUEST EDITORIAL

Is Partial Gastrectomy Desirable in the Treatment of Duodenal Ulcer?

GREAT advances have been made in our knowledge of the ulcer problem since Sir Berkley Moynihan—a relatively short time ago, in the pre-roentgen era—did so much to familiarize the medical profession with the clinical picture of duodenal ulcer and to promote its surgical treatment by means of gastroenterostomy.

It is interesting to recall that in the first quarter of the present century the majority of surgeons, following the lead of Moynihan, Deaver, the brothers Mayo, Horsley, and many others, came to look upon gastroenterostomy as a highly satisfactory operation for both gastric and duodenal ulcer, with or without obstruction. Balfour in a large statistical study concluded that the incidence of recurrent ulcer was only three per cent. As the years passed, however, internists became convinced that while gastroenterostomy did result almost invariably in the healing of duodenal ulcer, jejunal ulcers formed quite frequently and were more difficult to treat medically than the original ulcer had been. The exact incidence of such lesions was the subject of a long and more or less acrimonious debate between the surgeons and the internists. Finally after surgeons became interested in the procedure of resection ad exclusionem as advocated by Finsterer, it became clear that the recurrence rate following gastroenterostomy was somewhere between twenty-five and forty per cent. With the further development of surgical technique, resection either by exclusion of the duodenal ulcer or resection of the ulcer and the distal two-thirds of the stomach became more and more popular. The trend of the last twenty years has been toward the more frequent use of partial gastrectomy. The demonstration of recurrent jejunal ulcers after this procedure was met with the allegation on the part of the surgeons that not enough stomach had been removed. This stand was undoubtedly correct for there is no recorded instance of recurrent ulcer following total gastrectomy! However, it is clear that jejunal ulcers may develop and indeed not infrequently do develop after removal of the distal half, two-thirds, three-fourths or even four-fifths of the stomach. The incidence of such lesions is difficult to ascertain although Mage's statistics suggest a figure of approximately eight per cent. There is considerable evidence that the incidence will eventually prove to be greater than this. Such jejunal ulcers are notoriously difficult to treat medically and surgically, recurrences having been noted after two, three and four resections. The question arises as to whether the results obtained justify the continued use of the operation. The procedure is a major one and the resected stomach cannot be restored.

Those of us who see patients with recurrent ulcer are inclined to vote strongly in the negative even though Wangensteen reports that by resection of seven-eighths of the stomach including a good portion of the fundus, the incidence of recurrence can be reduced almost to zero. The argument against resection can be condensed to five points: 1. Partial gastrectomy is unnecessarily radical surgery for duodenal ulcer;

2. The incidence of recurrence is significant; 3. The operation cannot be undone; 4. Treatment of the subsequent jejunal ulcer is most difficult; and 5. The number of so-called "gastric invalids" without demonstrable ulcer but with severe gastritis as diagnosed gastroscopically or with disordered gastric function is significant (approximately ten per cent according to one study).

Uncomplicated non-stenosing duodenal ulcer can be treated satisfactorily by medical management as a rule and surgery is not required. If surgical treatment is preferred, the procedure of choice is transthoracic or trans-abdominal bilateral vagotomy as suggested by Dragstedt, sectioning the nerves above the diaphram. If stenosis is present in significant degree, producing or threatening to produce obstruction, vagotomy can be combined with posterior gastroenterostomy. There is reason to think, although proof has not yet been produced, that the addition of vagotomy to gastroenterostomy may eliminate subsequent jejunal ulceration. If, however, jejunal ulcers do develop, they may be treated medically more easily than those developing after resection, and indeed, if it seems wise, by partial gastrectomy at that time. However, the present writer ventures to predict that with the advent of vagotomy and improved methods of medical management, subtotal gastrectomy for duodenal ulcer will be discarded completely.

WALTER L. PALMER, M.D.*

*Professor of Medicine, University of Chicago School of Medicine, Chicago.

Floral Eponym (45)

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FOUQUIER, a pupil of Corvisart, was elected clinical professor in 1820. He was physician to Charles X and Louis Philipe and took part in the formation of the Academy of Medicine in Paris. He was the first to use nux vomica and strychnine. Besides many articles in the *Bull. de la Faculté de Medicine,* he wrote "Considerations sur le mode d'administration des médicaments (1820).

Fouquieria is a genus of desert plants found in Mexico and adjacent parts of the United States. They are small trees or shrubs, that become leafless in dry weather and have showy tubular flowers in terminal racemes. F. splendens is sometimes called Jacob's Staff. It is often used in Mexico as a hedge plant, making an impenetrable barrier.

FORTY PER CENT OF THE COUNTIES IN THE UNITED STATES HAVE NO REGISTERED HOSPITAL*

JOSEPH S. LAWRENCE, M.D.,
Director, Washington Office, Council on Medical Service of the American Medical Association, Washington, D. C.

Some of us are not finding it particularly easy to change from the traditional conception that sickness is a visitation of God's wrath and, therefore, man can do little about it but suffer, and that care for the afflicted should arise spontaneously as a humane act in the emergency, to the scientific conception of disease and the moral obligation of preserving health and providing reasonable methods of combating it when it does appear.

While a more accurate knowledge of the causes of disease and the normal functions of the organs of the body are dispelling the mystery of illness and impressing us with our individual responsibility, there still are some who feel that the nurses and physicians, those who are trained to care for the sick and afflicted, should be willing to do so more or less gratuitously as one might jump into a stream to save a drowning person. The discovery of bacteria and their role in our lives started the change in attitude. Community officials were charged with providing pure water and protecting the milk supply as an early application of this knowledge. Another important step in mass protection and fixing responsibility was made when industry was obliged to protect its employees against injury, but much educating in the facts of good health still remains to be shared before we shall be able to assume full responsibility for our health.

Much of the presently proposed legislation relating to medical care seems to indicate that its sponsors entertain the notion that its efficiency can be regulated by legislation, and prefer to have the government assume responsibility not only for the health of the public but also for the physical condition of the individual, rather than to help him understand why he should assume that responsibility himself. Amazing, it would seem they believe we are a sick and decrepit people, and give as a reason that the medical service provided by those trained for the purpose is inadequate or that there is a lack of sufficient numbers of trained persons to care properly for the people, which deficiency might be overcome by enactment of certain legislation.

An unusually large number of bills relating to public health and medical care came before the 79th Congress. We selected 222 of them for careful study and from time to time reported their progress and status to the State medical associations and other interested groups and individuals. Probably some of you are on our mailing list and have received the bulletins. Fourteen of these bills have become a part of our Public Law. The others are dead for the time but might be revived if the Congress should return in special session. Some of the unsuccessful bills came close to enactment and without doubt will be rewritten and introduced in the next Congress.

The most important of the bills enacted, both from the point of view of the public and of the profession, is the Hospital Construction bill. It makes immediately available $3,000,000 to be shared with funds provided by the several states for financing surveys to be made by state-created committees, for the purpose of determining whether new hospitals should be constructed and, if so, where they should be located and their size. $75,000,000 is to be made available annually for the next five years for the purpose of assisting the states in constructing the hospitals that the surveying committees recommend to be built. In sharing this appropriation, the Federal Government will require the states to appropriate $2.00 for each $1.00 they will receive from the federal appropriation. This subsidy is limited to the cost of construction alone and cannot be applied to maintenance or operation. There is a widespread need for hospitals and additional hospital facilities which should be met by this appropriation. The provision for the establishment of subsidiary hospitals and health centers will encourage, at least to a degree, the location of physicians in rural areas.

Of the bills that failed to pass, the outstanding one for us is the National Health bill. Prolonged

*Read by invitation at the annual meeting of the Medical Society of Virginia Beach, October 14-16, 1946.

hearings were conducted by the Senate Committee on Education and Labor on the two bills, S. 1606 and S. 1050. Many witnesses testified, most of them by invitation from the chairman of the committee, selected because of their professed sympathy for the legislation. The proponents manifested a striking similarity in their testimony which was generally more emotional than factual. Some of the very prominent witnesses admitted they had not read the bills and were testifying from material provided by a government bureau. Their chief arguments were that (1) medical care is poorly provided to residents of rural areas; (2) it is too costly; (3) the condition is national and cannot be solved by the states alone. The opponents to the bills admitted that medical care is not as readily available to residents of rural communities as it should be and that adequate medical services are expensive, but would not agreee that a compulsory payment program administered by the federal government would be a satisfactory solution of the problem.

Some of the unsupported statements or claims made by the proponents are interesting because of their inaccuracy of fact or implication. It has been frequently stated, to indicate our distressful condition, that 40 per cent of the counties in the United States do not have a registered hospital. Reports of the Census Bureau show that there are 3,077 counties in the United States and that 23 per cent of them have a population ranging from less than 1,000 to 10,000, and in another 16 per cent, the population ranges from 10,000 to 14,999. Thus, 39 per cent of the total number of counties have such a meager population that scarcely any would be able to support a hospital either financially or with patients, even if it were built for them. This explanation was not suggested by any of the witnesses who used the statement. Nor was any statement made with regard to the availability of hospitals in neighboring counties. Often it occurs that mountainous or sparsely inhabited counties have more populous neighboring counties with available hospital facilities.

Further study of census figures emphasized the accuracy of the economic deduction by revealing that in 732 counties, or nearly 24 per cent, the ratio of population to area varies from less than one person per square mile to a maximum of fifteen persons per square mile, a ratio which at its best is far too thin to support a fully equipped hospital. The statement also is frequently made that the same proportion of counties is without health departments. It is obvious that with taxes as they are, such sparsely settled communities would find it very difficult to meet the expense of a county health department.

Another statement which has some factual basis but is nevertheless misleading is a comparison of the infant mortality rates among the states and that of the United States with other countries. The rate is attained by comparing the registered deaths with the reports of births. This would be fair enough if there were uniformity in collecting the data. The Census Bureau reports, however, that there is a laxity in registering births, especially in the south central states. In one of these states the registering of births is given as only 68 per cent complete, and in another state, only 38 per cent of the non-white births are registered. Some error occurs also in those states in registering deaths, but not to the same extent. Hence, the registered deaths are given an undeserved high ratio, a condition which does not exist to the same degree in the other states. The true infant mortality rate is really not known in those states where registering is so far from complete.

In comparing our maternal and infant mortality rates with those of other countries, we encounter similar difficulties, principally due to lack in uniformity in classifying stillbirths and in defining what should be classed as a maternal death.

One more misleading statement that is made may be considered before I continue with my subject. It is often publicly stated that four million draftees were rejected because of physical disabilities that might have been corrected or prevented had they been provided with adequate medical service. This statement continues to be used in spite of the fact that it has been repeatedly shown by competent draft authorities that only one-sixth of those rejected had remediable defects.

The comment is often heard that we should and could have medical service available as is public education. Let us spend a minute in seeing how effective our public education system is. Recently the United States Chamber of Commerce made a survey of educational facilities in the United States and submitted its findings in a report entitled "Education and Investment in People". Some of the

findings are very startling, for example: 60 per cent of the people over 25 years of age never completed the eighth grade in elementary school; 14 per cent completed less than five years; 29 per cent attended high school, and only 10 per cent have gone to college. Two million or 8 per cent of the children between 6 and 18 years (the compulsory span) are not attending school, and the average period of annual attendance ranges from 123 to 152 days. It may also be interesting to observe that the teachers' salaries in only four states average over $2,000 while in 14 states the average is less than $1,000. One can imagine how small some individual salaries must be with the average so low. Is this the type of public service medicine should emulate?

Washington anxiously awaits the outcome of the approaching elections. A majority of people are satisfied that the next Congress, regardless of which party wins, will be less liberal with public funds, for the conservatives and liberals as such do not seem to be divided along party lines. We can expect the next Congress to be interested in medical care problems, but I hope its interest will be aroused and maintained by a more widespread stimulus than that provided the present Congress from the government bureaus. Some states are making special effort to interest their congressmen in the progress they are making with their prepayment plans. Congressmen will be glad for this information. Most of them wish to see medical care remain as a state function, but the proponents of federal control have had so little opposition to their propaganda that it has seemed to not a few congressmen that the job may be too big for a state.

The advocates of a national health program are likely to change their strategy in the future because hearings on the Wagner-Murray-Dingell bill were not productive of as much favorable sentiment as had been expected. They are not likely to demand further hearings for a few years, and in the meantime, will attempt to secure increased government control by amending certain sections of the Social Security law and at the same time will seek to have the state legislatures enact laws including compulsory methods. That does not mean that they will withdraw from Washington; here they will connive with government agencies in formulating rules and regulations for the administration of funds already provided for specific purposes. Such rules and regulations have the force of law and it will be their aim to see that they are drafted so that the basis of control will repose with the dispensing federal agency. Most subsidies are voted with specific provisions that in their expenditure the cooperating state shall have the privilege of formulating the plans for the work and submitting them to the dispensing agency for approval, but in practice the procedure is actually reversed. The federal agency formulates rules and regulations which must be incorporated in the submitted state plans if they are to receive approval. And unless the plans are approved and the state authority continues from year to year to follow the instructions and directions received from Washington, it may lose its appropriation. The administrator's decision is final. Attempts have been made recently in drafting bills to provide that the states may have recourse to the courts when they are not satisfied with the administrator's opinion, but these have usually failed. The hospital construction bill contains such provision and when the President signed it, he remarked that he regretted its presence.

With these much-sought-after federal subsidies, the government bureaus are subtly extending their lines of control into all sections of the nation. The public innocently applauds the agencies' glowing reports of achievement without realizing the extent of federal control that is entailed. At any rate, it might be wise for us to investigate where the plans of subsidies are leading.

Promoters of government compulsory health plans are jubilant over the active cooperation they are receiving from the leaders of the labor groups, but they are manifesting anxious concern over the growing success that our prepayment plans are achieving. In public address they describe the voluntary plans as weak and puny and prophesy their ultimate failure, but at the same time, these nervous leaders are blatantly endeavoring to effect a nationwide organization of prepayment and cooperative plans, hoping to secure and retain control of such organization for the purpose of eventually persuading it to solicit federal financial assistance.

What does Washington offer us in the way of a constructive program for the coming Congress? It is reported that a bill to provide extensive courses in health instruction in all school curricula is being drafted for early introduction. There is great need for widespread simplified instruction in the facts

of health. It will help us solve the problems from a factual basis rather than from an emotional one upon which most of our present activities are largely based. Too little attention is given to educating people to know what to them individually is good health and how they separately should proceed to maintain it. Not only children but adults can be taught much with regard to the proper use of correct food, adequate and appropriate relaxation and exercise, and the selection of a suitable vocation. Such health instruction programs in schools need not involve physical examination of the students and treatment of discovered conditions. These activities should be considered under a separate program.

An important program developing from a Washington base which has our approval and our active assistance is being spoken of as the greatest government medicine program of all time. I refer to the Veterans Administration medical program. It is still in its infancy and it has sought and is receiving our hearty cooperation. In its development may lie the solution to the medical service problems of today. The plans adopted by the states are not identical and their variances may prove advantageous.

Earlier I mentioned that labor unions are supporting legislation favoring a national health plan. Not all the large unions are pursuaded the government can do the best job; several have plans of their own which the employer may or may not be asked to finance. The tendency is growing to have the medical care program financed and controlled by the union members themselves so that they may retain the intimate doctor-patient relationship. Program B of the United Mine Workers, we understand, will be of this character.

This is the situation in Washington and one is entitled to ask, What is the next move? It is the profession's opportunity and it is being accepted. Voluntary prepaid hospital insurance plans are proving so successful and popular that it is rather easy to devise and promote somewhat similar plans for providing medical services. Almost every state in the union has at least one plan working now, and others are in process of organization as their need is recognized. These plans should not be looked upon as substitutes for government plans; they are the natural application of our American free enterprise and thrift. There is no complaint of the quality of medical services obtainable. The problem is its cost and availability under certain conditions which these programs aim to meet. The government program, on the other hand, visualizes compulsion of payment of fixed contributions or taxes in return for which the government will not simply finance, but will undertake to furnish medical services to those who can qualify under a complicated system of rules of eligibility.

The success of our voluntary prepayment plans will depend upon the intelligent cooperation of the people. We believe there will be a greater desire for knowledge of health matters expressed by those who join a voluntary prepayment plan than there could be among those whose principal relationship with a program or plan is determined by an involuntary contribution deducted from their wages. The voluntary prepayment plans are much more democratic and do more to encourage intelligent cooperation by the individual than any compulsory plan can do. The prepayment plans are less expensive and less bureaucratic also.

The American Medical Association, through its Council on Medical Service, is lending its assistance in the development of the voluntary programs in a number of ways and especially by providing for their standardization, thus guaranteeing to the public the high quality of service they offer, and enabling the groups to reciprocate with each other in providing services for their clients. By aiding in the development of such groups, we are meeting the challenge that is so often made that the profession has only a negative program. But I think we should not feel satisfied until we have outlined a more extensive program—set ourselves an objective to be attained in, say, 25 years. What do you think will be the prevailing method of medical practice 25 years hence? Will individual practice be replaced by some form of group practice? If so, will the voluntary prepayment plans of today be dominant? Will the medical societies retain their directing interest in the administration of the plans, or will they give way to commercial insurance companies? And will the insurance companies simplify the service to indemnity insurance? What will be industry's program in another quarter of a century? Will it provide for full medical care for its employees, not simply compensation for disabilities related to their occupations? Will the unions take over the responsibility of providing medical services for their members, or members and dependents? Will they employ the cooperating phy-

sicians on salary and conduct ambulatory clinics? What will be the program of the cooperatives at that time? Will they build and conduct medical schools as well as provide medical service for their members? Or do you think that by that time a government program will be in full possession of the field?

In dreaming of our future, we must attempt to evaluate the effect of the following influences also: The Veterans Administration's medical care program, the government's mental hygiene, venereal disease, tuberculosis and cancer programs. What effect will our intense individualistic programs against poliomyelitis, cancer, heart disease and tuberculosis have upon our future objective? Two other influences which will very certainly help us to mold the future picture are social security and education of children in health facts.

Although we cannot, without the aid of a crystal ball, see that far into the future, would it not be wise for us to conceive some objective and set our aims upon it? If we do not do just that, I fear that we shall drift into the hands of the government, probably an American version of the Beveridge cradle-to-the-grave scheme.

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Rehabilitation of the Tuberculous.

Dr. H. St. John Williams gave an interesting statement on the rehabilitation of the tuberculous in the *N. Y. State Journal of Medicine,* March 15, 1946. The following quotations are from that article:

"It is not generally recognized that tuberculous patients have a unique opportunity for constructive thinking and study while relaxing and resting their bodies. Although physical activity is restricted in the treatment of tuberculosis it is possible for the patient, through directed education under medical supervision, to leave the hospital better equipped to face life than when he entered it. This process of education is known as rehabilitation, which has been defined as the restoration of the handicapped to the fullest physical, social, vocational and economic usefulness of which they are capable."

"Since rest, with only a limited amount of physical effort, is necessary to regain health and to continue in health, the new life must bring to the patient the maximum of financial return with a minimum amount of physical effort. This can be accomplished most easily by improving the patient's knowledge and education. . . If the mind is occupied with constructive thinking, the patient's physical condition improves more quickly, and a plan for his future may be evolved. Constructive reading and study are part and parcel of rehabilitation."

"In many tuberculosis hospitals, courses in high school subjects and reviews in elementary studies are given. These are considered as important as food, rest and surgical treatment. Occupational therapy focused on arts and crafts is not entirely adequate. . . Today we speak of vocational therapy, which means treatment of the patient's mind through preparing him for a vocation which he can utilize when he is ready to return to the competitive world.". . .

"The community must be taught that although rehabilitation does cost money, the lack of it costs more, not alone in illness, but in dollars and cents."

The above quotations have been used to bring to your attention the need to support the efforts of the Virginia Tuberculosis Association and its local organizations, which are using a part of their income from the sale of Christmas Seals to help finance rehabilitation programs in the state and local tuberculosis sanatoria. The Christmas Seal Campaign began on November 25.

SULFAGUANIDINE OINTMENT IN THE TREATMENT OF BURNS*

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To those familiar with the problems involved in handling severely burned patients, it is a well known and established fact that during the immediate and early stages of treatment, i.e., the first week to ten days, there is transient liver and kidney damage[1-2-13] ascribed to the absorption of toxic substances from the burned surface. It is also a recognized fact that when sulfa drugs are used locally in treatment of the burns, the amount of systemic absorption is directly proportional to the area of burned surface.[3] With this thought in mind, it was decided to run a series of cases, using a non-absorbable sulfa drug, i.e., sulfaguanidine, to determine if the advantages gained from the local use of the sulfa drug could be attained without adding the additional hazard of sulfa toxicity to the already damaged liver and kidney tissue.

Sulfaguanidine was chosen due to the fact that, at the time this study was begun, no other non-absorbable sulfa was on the market. It is a fairly simple sulfonamide compound representing merely the attachment of a guanidine ring to the sulfonamide nucleus—the structural formula being

It is a relatively insoluble compound. No sodium salt exists and this drug is never used for the attainment or maintenance of sulfonamide levels in the blood. In other words, it stands apart from all other sulfonamides in that it is not used for blood stream or constitutional infections but only for highly specialized use where it furnishes a concentration of sulfonamides in local areas.

In the case of sulfaguanidine there is no typical blood curve, since the absorption, if it occurs, is slow and somewhat erratic. However, one should correct the impression that is generally abroad that sulfaguanidine is not absorbed.[4] It most certainly is absorbed from the bowel, and blood levels as high as 3 mg. per cent of free drug may appear. It is also capable of producing toxic reactions.[5-6-7] Hyperpyrexia, hematuria, crystalluria, and skin rashes have been described by various authors.

There is a paucity of material in the literature on the action of sulfaguanidine in other than the coliform group of bacteria.[8-9] However, it was found by Ambrose and Haag[4] that the drug was absorbable from the pleural and peritoneal cavities and there appear to be no contraindications to its use locally on the skin.

MATERIAL

On all burned patients admitted to the surgical services of St. Luke's Hospital from the period of July 1st, 1943, to March 1st, 1945, the author was in complete charge of local and systemic treatment, but was limited by the surgeons in charge in performance of laboratory studies that might have been desired. This explains the reason for the variable laboratory work as shown by the statistics of the cases herein outlined.

TREATMENT OF SHOCK

Upon admission to the hospital, the patient was undressed on the conveyance on which he was admitted. From this, he was then removed to a sterile sheet and was immediately covered with another. All personnel were masked, gowned, and gloved. Cultures were taken from the burned areas. Attention was then given to the treatment of shock. A No. 20 gauge needle was inserted into a vein and 5 cc. of blood withdrawn for a hematocrit determination. A previously prepared intravenous instillation of plasma was infused through the same needle. This will be found an exceedingly valuable point in the preservation of veins in patients who have severely burned extremities or poor veins for intravenous therapy. At this point, a quarter grain of morphine was injected into the intravenous tube and an additional quarter of a grain given subcutaneously. If additional analgesia was needed after a period of fifteen or twenty minutes, doses of eighth grain were given intravenously as frequently as necessary to maintain the comfort of the patient.

*Read before the Wise County Medical Society, Appalachia, Va., February 28, 1946.

In several instances, patients were so severely burned or in such a state of vascular collapse on admission, that no veins for therapy were available. In these patients, bone marrow infusions were used. The sternum is the site of choice for marrow puncture in adults but the fact must not be overlooked that both tibiae may be used although technical difficulty is often encountered in penetrating the thick cortex of these bones. Tibia or femur is used exclusively in children as there is no sternal marrow cavity until about four years of age. Even in children of this age or older, tibia and femur are used in preference to sternum due to ease of puncture and the fact that a needle in an extremity is less liable to dislodgment.

The advantages of marrow infusions are generally overlooked and we prefer them to phlebotomy, as it does not add the complication of an open wound to be cared for in a critically ill patient.

These infusions were kept running from periods of eight to thirty-six hours with no difficulty providing one point is observed in their continuance—that being, the burette not be lowered when more fluid is added. If this is done, the infusion will inevitably stop and cannot be re-started through the same needle as these infusions run by hydro-static pressure alone and, when the pressure in the tube is decreased, there is a reflux of marrow into the needle which clots within 30 seconds.

After observing numerous burned patients, one is soon able to judge quickly from the area burned and the general condition of the patient as to whether or not administration of plasma is going to be necessary. We made it a point to administer no plasma to patients with a hematocrit of fifty or below and these patients without exception did well.

No set rule was followed as to the amount of plasma administered to any individual patient requiring such treatment. Patients suffering from shock were given continuous infusions and the hematocrit was determined every four hours until a level of fifty was reached. It is necessary to continue the hematocrit determination for at least two 4-hour periods after this level has been established, for some patients will lapse into shock after cessation of the infusion. If no laboratory facilities are available for hematocrit and protein determination, a rule of thumb that serves well is to keep infusion running until temperature of the lower extremities is normal.

Plasma was used exclusively in the treatment of shock, and it is the feeling of the author that it is indeed a rare case that cannot be pulled through this critical period with present day methods of treatment. No adrenalin or adrenal cortical extract[10-11] was administered as it has been our experience that they add nothing to the treatment of shock. Excessive heat is to be avoided and, in severe cases, the use of oxygen is not to be overlooked.

Local Treatment

No patients were subjected to scrubbing or extensive debridement.[12] If there were ruptured blisters or shreds of burned skin, these were removed with scissors and forceps. Any burned clothing or foreign material adhering to the burns was removed with forceps or a wet saline sponge. *Unruptured blisters were left strictly alone.* A 5 per cent emulsion of sulfaguanidine*, following the formula of Ackman and Gurd,[14] impregnated into strips of wide mesh gauze bandage was kept in sterile containers at all times in the Accident Room and these were applied directly to the burned areas—two or three layers being employed. The consistency of this emulsion is such that it adheres readily to the skin. A three or four inch layer of sterile mechanics waste was padded directly over this and bandages applied to give firm pressure. This method of treatment is ideal for extremities, being easily applied and easily maintained; however, difficulty is encountered in maintaining this type of dressing around the buttocks and to some extent on the trunk, although with patience and care satisfactory dressings can be applied in the latter area. If there is any place in the present day treatment for the eschar of tannic acid or triple dye, it is our feeling that the buttocks is that place.

This method of treatment was not carried out with the face as it is very difficult to secure pressure and it does very little to reduce the edema which, regardless of treatment, usually clears up by itself in a period of three to four days. Burns of the face and neck were liberally covered with sterile vaseline without any added dressing.

In comparing pressure dressings with the eschar treatment several facts impress themselves upon those in attendance.[15-16] The patients with pressure

*Sulfaguanidine, 5 per cent; Distilled Water, 24 per cent; Triethanolamine, 2 per cent; White Bee's Wax, 5 per cent; Liquid Paraffine, 64 per cent.

dressings seem to require far less plasma for the control of their shock. Most gratifying is the rapid relief of pain and freedom of movement allowed the patient. One has to attribute some of this to the local analgesic effect of the sulfaguanidine[14] and it is not uncommon to have a patient's unsolicited comment on the fact that he or she is comfortable and without pain within half an hour after completion of dressing. It is not unusual to see a patient with both lower extremities badly burned sitting up in bed within a period of forty-eight hours exclaiming that he is feeling fine, has no pain, and enjoying a full diet. This is, indeed, a contrast to the poor general condition shown by patients with large tanned areas who refuse food and require morphine for long periods of time to relieve the pain caused by moving in bed. There is no danger of gangrene from contracting eschars in complete circular burns and no occasion to hunt for areas of infection under eschar. If any area should become infected, it has free drainage. This bulky dressing also has the added advantage of placing a large amount of sterile material around the wound, protecting it from all danger of outside contamination. There is no added destruction of delicate epithelial structure such as is seen with the tanning methods, and many of the burns are completely healed with the first change of dressing on the twelfth to fourteenth day.

Late Local Treatment

The pressure dressings, unless they became loosened by turning in bed, were left undisturbed for a period of twelve to fourteen days. If it was at all feasible, disheveled dressings were reinforced and left intact until this period of time elapsed. The patient was then transferred to a closed dressing room, physician and nurse sterily masked, gowned, and gloved, and no one allowed admission to the room during the dressing. Primary dressings were removed and sterile sheets or towels placed under the burned areas. Cultures were again taken and at this time any ruptured blisters or loose skin were removed by sharp dissection.

First and second degree burns, without exception, would be healed in this length of time and no infection of any of these was encountered. Third degree burns were just beginning to slough. All areas were again dressed with ointment and liberal layer of cotton waste and snug bandages. These dressings were usually left in place for another week. Pressure was again applied at this time because it was the feeling of the author that it hastened slough.

At time of second dressing, the slough had usually begun to separate in sufficiently large areas and the depth of the burn was sufficiently clear for sharp debridement to be done under sodium pentothal. The areas were then wrapped in roll gauze through which Dakin's tubes were inserted and the patient kept continuously wet with Dakin's solution. It is necessary to protect the skin edges with vaseline, as the patient is quite uncomfortable at this time from the burning caused by Dakin's solution. *Note:* It is also important, before application of the vaseline, that the skin edges be thoroughly shaved and washed with soap and water as this area harbors bacteria. These dressings were changed daily and additional debridement done daily until a clean granulating surface was obtained.

Preparation of the granulating surfaces for skin grafting presents a complex problem and the entire success of the grafting operation depends on the proper preparation of the granulating surface.[17]

We had very poor success with saline dressings. One of the primary prerequisites is pressure, as this keeps the granulations to a minimum. We obtained this by luxuriant gauze dressings, plus elastic bandages. We developed a routing which in our last three grafts produced 100 per cent take. As soon as all slough was removed, a continuous 1 per cent sulfallantoin[18] soak was applied. This was continued for a period of three to four days and followed by continuous wet soaks of ½ of 1 per cent acetic acid to eliminate pyocyaneus infection[19] on which the sulfallantoin had no effect. Forty-eight hours was usually sufficient time for this to be accomplished. One day prior to skin grafting, the area was sprayed liberally with sulfanilamide powder and an unusually firm dressing applied. The patient was given the usual pre-operative sedation and taken to the operating room with these dressings intact.

Split thickness Padgett's dermatome grafts were used exclusively. These were cut fourteen thousandths of an inch thick. Those unfamiliar with the use of the dermatome will encounter great difficulty in obtaining suitable grafts. However, if several small details are paid strict attention

to, no difficulty is encountered. It is an absolute necessity that all oiliness and moisture of the skin of the donor site be removed. The area was thoroughly scrubbed with alcohol, followed by vigorous application of ether. The skin is now ready for a coat of "dermatome glue". We found none that worked quite so well as that distributed by the makers of the dermatome. This was applied with a one inch camel's hair brush in a smooth layer, *with no restroking of the covered area.* The drum was painted in a like manner and *both allowed to dry for at least five minutes.* The dressings were removed from the recipient areas during the period of drying. Grafts were removed directly from the dermatome and applied to the recipient area after it had been sprinkled liberally with sulfanilamide powder.

Scar tissue covered by epithelium at the junction of the granulating area and normal skin was then removed by sharp dissection and the graft sutured into place with a slight amount of tension using continuous suture of No. 3 silk. Small puncture areas were made in the skin at one inch intervals to allow for drainage. No sutures were taken other than around the periphery of the graft, for, in our early experience, we found that most of our grafts that became infected did so around sutures taken to secure the middle of the graft tightly to the underlying granulation tissue. Over the graft was placed wide mesh paraffine gauze, followed by a thick layer of cotton waste bound in place with elastic bandage to produce pressure. Donor areas were dressed with vaselinized gauze and dry dressings. These dressings were left intact from seven to ten days. At this time it was possible to tell what percentage of the graft had taken. Any infection present was drained and the area cleaned with saline solution. It was again sprinkled liberally with sulfanilamide powder and pressure applied for another seven days. At the second dressing, on the 14th day, the grafts had taken sufficiently so that a protective bandage was all the dressing needed.

We all agree that early grafting to prevent contractures and heavy scarring is to be desired but we have been unable to do this at the early dates published by some authors. It has been our experience that at the end of 14 days when some authors advocate grafting, our burns have just begun to slough.[14-20-21] Perhaps this is due to the fact that these burns have been deep third degree burns which not only destroyed all layers of the skin, but underlying fat, fascia, and tendons as well.

We also agree that block excision of the burned area and immediate skin grafting is the treatment of choice; but, again, we are unable in two weeks' period of time to always recognize the entire extent of the burn. This procedure is also not applicable when large areas are burned, as excision of such areas and the covering of same with skin is a major operative procedure. On several occasions we have seen these patients go into shock on the operating table with the removal of two or three drums of skin. For this reason, we never endeavor to remove more than three drums of skin at one time. All these patients should be given the benefit of plasma or whole blood during or immediately after operation.

Late General Treatment

With extensive skin destruction, two crying problems present themselves in the management of these patients. When these can be met adequately, the care of the severely burned patients will be practically solved, for, with the present day adequately supplied plasma and blood banks, there are few patients who cannot be pulled through the period of shock—the exception being those who have inhaled live steam, smoke, or flame and burned their air passages.

Most outstanding is that of nitrogen loss during the period of slough and granulation. Work is being done in numerous clinics on this problem at the present time and it is hoped that adequate treatment will soon be forthcoming.[22-23]

Our patients were given a high protein, high caloric diet supplemented with vitamins. In addition, daily infusions of whole blood, plasma and amino acids were rotated each third day. Even with this, the weight loss in a period of three to four weeks was appalling. One patient dropped from an admission weight of 190 pounds to 110 pounds in five weeks.

The second problem is to find material to cover these granulating surfaces and it is gratifying indeed to see the splendid response and weight gain in a patient when you are able to cover as little as fifty to sixty square inches with new skin. Cosmetic and functional results are superior when good size sheets of skin can be obtained and used; but

when the area to be covered is large and the skin available small, the only methods available are the postage stamp technique, dermatome grafts,[24] resplit dermatome grafts,[25] and, last of all, pinch grafts. We have had no experience with homogenous skin grafting and can make no statements concerning this, although there is no doubt that it has a definite field if granulating areas can be covered sufficiently well to keep the patient alive while skin on donor sites is regenerating for subsequent additional split thickness grafts from the same donor areas.

CASE REPORTS

1. F., age 13 months. Spilled hot water on leg. First and second degree burn—4 per cent.

2. M., age 21 months. Pulled tea kettle from the stove, spilling boiling water on arms, chest, and back. First and second degree—9 per cent.

3. F., age 47 years. Burned hands and arms fighting brush fire. First and second degree—8 per cent.

4. F., age 17 months. Hot water spilled on her by older brother. First degree of chest—5 per cent.

5. M., age 58 years. Patient had finished day's work and tried to pass the coke rack on the discharge side of the coke oven. While attempting this dangerous short cut, he grabbed the hot coke rack and his glove became hot and he attempted to jump to the quencher car track about ten feet below. In doing this, he struck the power rail and fell into stray pieces of hot coke which set his clothing afire. First and second degree burns of both hands and arms, first and second degree burns of the buttocks, and third degree burns of both legs and thighs from hips to ankle—about 47 per cent body surface. Seven Padgett's dermatome grafts applied the first fifty-two days after admission. The last graft one hundred sixty days after admission. A long period of convalescence followed because the patient would make no effort to walk as he desired compensation for rest of his life. Finally discharged 239th day after admission. Immediately re-employed in plant in lighter capacity.

6. M., age 38 years. Was having a fight with his wife, who poured a pot of hot coffee on him as he sat at the table. First and second degree of back—5 per cent.

7. M., age 29 years. Spot burns of hands, arms, back and chest from moulten slag which exploded while being dumped. First, second, and third degree—13 per cent.

8. M., age 47 years. Injured in same accident as Case No. 7. Spot burns. First, second, and third degree—9 per cent.

9. M., age 33 years. First, second, and third degree burns—39 per cent. Was loading machinery in a box car which had only one outside opening. This machinery was covered with a layer of grease and as it was wintertime, it was necessary to cut this grease with gas to apply it. While in a corner of the box car performing his duties, the patient struck a match to light a cigarette. This caused the gas ladened air to flash, setting fire to his greasy clothing. Third degree burns of both legs from groin to ankles and the dorsum of both hands and fingers. Padgett's dermatome graft to back of both hands and fingers on the 32nd day. The legs were prepared for skin grafting, but, in spite of daily transfusions, the patient expressed no desire to live and died of inanition on the 66th day. Post-mortem revealed cloudy swelling of the liver and moderate to severe cloudy swelling and degeneration of the convoluted tubules, indicating a toxic nephrosis. Stomach and duodenum were grossly and microscopically normal.

10. M., age 37 years. 62 per cent third degree burns. Patient was employed as a rotary driller. He went to start the water pump which had frozen. He placed kindling underneath the pump and saturated it with gas from a five gallon can. The fire was ignited. He stepped backwards, slipped on some ice and spilt the remainder of the gasoline in the can over his clothing which was immediately ignited. An endeavor was made to prepare this huge denuded surface for skin grafting and on the 30th day two drums of skin were placed over the buttocks; however, the patient was in such poor state that these grafts did not take. He succumbed on the 40th day and post-mortem examination revealed many infected emboli of both lungs. Liver and kidneys revealed cloudy swelling. The mucosa of the stomach and duodenum was normal. This was our only invasively infected case.

11. F., age 39 years. Burned hands and arms while using gasoline to clean clothing. First and second degree—5 per cent.

12. M., age 28 years. Patient backed against a hot metal bar, burning both popliteal spaces.

Third degree—8 per cent. Grafted.

13. F., age 13 months. Pulled hot iron off the ironing board, which lodged in crib against child's leg. Second degree—2½ per cent.

14. M., age 19 months. Burned both buttocks by sitting in a pan of hot water which mother had placed on the floor. Second degree—4½ per cent.

15. M., age 35 years. 93 per cent of body area first, second, and third degree burns. Was sprayed with steam from exploded boiler at laundry in which he worked. Succumbed 11 hours. On post-mortem, outstanding lesions were in the lungs. All of the lung tissue had a solid coagulated appearance. Most of the alveoli were collapsed or filled with coagulated edematous fluid. Even the blood vessels and small bronchi showed this characteristic boiled appearance. A few patent blood vessels were congested with blood. These changes were undoubtedly due to the inhalation of steam. The mucosa of the stomach and duodenum showed extensive necrosis and sloughing.

16. M., age 56 years. 96½ per cent first, second, and third degree burns. Scalded in the same accident as Case No. 15. Succumbed 10 hours. Post-mortem findings of the lungs and stomach as in previous case.

17. M., age 33 years. Radiation burns to the back of both legs from moulten metal. First and second degree—6 per cent.

18. M., age 74 years. Fell into flaming brush pile. 86 per cent of body surface third degree burns. No treatment attempted other than morphine. Succumbed 8 hours. Post-mortem showed usual liver and kidney damage. The stomach contained numerous petechial hemorrhages and with almost complete loss of rugae. Duodenal mucosa was thin and glistening but showed no hemorrhage or ulceration.

19. M., age 29 years. While endeavoring to pull a man from a blazing oil truck, burned hands, arms, and face. First and second degree—7 per cent.

20. M., age 46 years. First and second degree of hands and arms—5 per cent. Assisting Case No. 19.

21. F., age 22 months. Hot water spilled on abdomen, thigh, and buttocks. First and second degree—7 per cent.

22. M., age 43 years. Blow torch exploded while in use. First and second degree. Two hands —4 per cent.

23. F., age 39 years. While sitting in the kitchen, the coal stove exploded and sprayed patient with hot coals which set clothing afire. Arms and back first, second, and third degree—13 per cent. Discharged cured in 19 days.

24. F., age 34 years. Caught dress afire over cook stove. Hands, arms, chest, and back first and second degree—14½ per cent. Discharged cured 16 days.

25. M., age 24 years. Arms and hands first and second degree—5 per cent. Greasy sweater caught on fire while repairing car.

ADMISSION CULTURES

Case No.

Organisms	4	5	6	9	11	14	17	19	22	23	24	20
B. Subtilis	x	x	x					x				N
Non-Hemolytic Strep.	x							x			x	E
Staph. Albus		x				x	x		x	x	x	G
B. Proteus				x								A
Staph. Aureus				x	x							T
Hemolytic Staph. Albus						x		x				I
Proteus Vulgaris							x					V
Hemolytic Strep.							x					E
Staph. Citreus								x				

Chart No 1

RESULTS

Infection and Chemotherapy.—Probably no other surgical wound is harder to evaluate from a bacterial standpoint.[12-26] It is impossible to tell the exact depth of burn immediately and many types of bacteria are recoverable from the burned surface and from different depths of the skin. Some of these bacteria are normal inhabitants of the skin and are non-pathogenic. While in combination with other bacteria, they may become pathogenic due to synergism. Imposed on this is the question of nutrition and the host's resistance to the contaminating bacteria. Therefore, these wounds should not be spoken of as infected or non-infected, because they are in most instances never free from bacteria and the terms of choice to use should be non-invasive infection and invasive infection. For this reason, all precautions should be taken in dressing to prevent invasive infection, as most of the burns will not develop an invasive infection unless exposed to outside contamination. As shown by Chart No. 1, eleven out of twelve admission cultures were positive. The bacteria flora changes from time to time and during the period of slough is predominantly proteolytic. Some authors in the literature describe

their wounds as non-infected and ready for graft in periods varying from fourteen to twenty-one days. This is a false impression and should be corrected because slough cannot take place without the aid of proteolytic bacteria. For this reason, the opportune time for skin graft should be judged from the clinical appearance of the granulating surface rather than from bacterial cultures.

Although it is generally believed and accepted that sulfa therapy should be given parenterally, we withheld administration by either mouth or vein in the entire series. First and second degree burns were without exception healed within two to three weeks. There was no evidence at any time of lymphangitis, lymphadenitis, bacteremia, or cellulitis. There was no ulceration of normal skin edges and suppuration was limited to tissues devitalized by the original injury. None of our third degree burns became invasively infected with one exception. This was Case No. 10, with 62 per cent third degree burn. With this immense granulating surface, the patient was in severe pain on the least movement and he repeatedly moved his bowels in the tub when we were soaking slough from his legs and buttocks. Upon his death, many infected infarcts were found in the lungs, liver, spleen, and kidneys.

Hooker and Lam demonstrated that the quantity of absorption from a burned surface was directly proportionate to the area burned. Chart No. 2 shows the percentage areas burned and the sulfa levels obtained which confirm this observation—the level going as high as 16.9 mg. per cent in a patient with 93 per cent body surface burned. It is interesting to note that the level in serum removed from a blister on this same patient was 7.7 mg. per cent. We also observed that the absorption was greater in patients with first and second degree burns than with those having third degree burns. There were no complications from sulfa absorption such as hematuria, crystalluria, fever, rash, or agranulocytosis in the entire series.

All five patients who succumbed had a post-mortem examination. Three of these died within thirty-six hours after initial injury. All of these patients showed loss of rugae of the stomach and varying stages of necrosis and slough of the mucous membrane of the stomach and duodenum. The other two patients who died after a month's admission to the hospital showed normal mucosa. Although no case of Curling's ulcer manifested itself in our series, it would seem that there is marked duodenal and stomach mucosal damage during the period of shock, and it is surprising that more ulcers do not develop than are seen.

SULFAGUANIDINE BLOOD LEVELS

Case No.	Percentage Burned	Blood Level
4	5%	Neg.
6	5	Trace
8	9	"
11	5	"
12	8	"
13	2½	Neg.
14	4½	Trace
19	7	"
20	5	Neg.
22	4	Trace
24	14½	"
5	47	3.5 mg.
		Trace 2nd day
		Trace 8th day. Redress
10	62	10.3 mg.
9	39	2 mg.
		2 mg. 8th day. Redress
23	13	1 mg.
15	93	16.9 mg.
		7.7 mg. Serum from blister

Chart No. 2

It would be interesting to be able to examine these areas of the gastro-intestinal tract of other patients subjected to long periods of shock caused by conditions other than burn to try and evaluate the influence of burn toxicity on this phenomenon.

All patients were administered tetanus gas gangrene anti-toxin upon or shortly after admission. No cases of tetanus developed. With the occlusive type dressing which permits free drainage at all times, we do not believe that this therapy would be necessary and would not have used it had it not been for the fact that we would have been criticized and legally liable had a case of tetanus developed.

The average length of stay in the hospital was twenty-eight and one-half days, and when Case No. 5 was excluded (239 days—see Case Reports), the average hospital stay was nineteen and two-thirds days.

The average burned surface on the entire group was 23.8 per cent.

There were five deaths, with a mortality of 20 per cent.

Nine patients received plasma. The least amount

given was 400 cc. and the greatest was 5,500 cc. The average amount 1,905 cc.

Four patients had single Padgett's dermatome grafts, and one patient had seven Padgett's dermatome grafts.

CONCLUSIONS

1. A series of 25 cases of burns treated with sulfaguanidine emulsion are presented with discussion of early and late local treatment.

2. The advantages of pressure dressings in comparison to tanning are cited.

3. The problems of skin grafting and protein loss are discussed. It is concluded that the best treatment of protein loss is prevented by early excision of the burn with immediate skin graft, provided the depth of the burn can be estimated and the operative procedure is not too extensive.

4. Sulfaguanidine was absorbed in direct proportion to the area of the burn and no toxic reactions were observed.

5. A sulfa drug—it need not necessarily be sulfaguanidine—in a slowly absorbable form, should be used locally for whatever benefit it may have on prevention of invasive infection. The local analgesic effect in itself is sufficient to recommend its continued use.

NOTE: This paper was done entirely on an experimental basis and it is the feeling of the author that the sulfonamide of preference for local use is sulfathiazole.

BIBLIOGRAPHY

1. Wolff, Elkinton & Rhoads: Liver Damage and Dextrose Tolerance in Severe Burns, *Annals of Surgery* **112**: No. 1, 158, 1940.
2. Saltonstall, Walker, Rhoads and Lee: Influence of Local Treatment of Burns on Liver Function, *Annals of Surgery* **121**: No. 3, 291, 1945.
3. Hooker and Lam: Absorption of Sulfanilamide from Burned Surfaces, *Surgery* **9**: No. 4, 334, 1941.
4. Ambrose and Haag: Comparative Blood Concentrations of Sulfaguanidine, Sulfanilamide, and Sulfathiazole After Administration Orally, Peritoneally, and Pleurally of Dogs, *Surgery* **12**:919, December, 1942.
5. Whyte: Sulfaguanidine and Renal Damage, *British Medical Journal,* page 373, March 11, 1944.
6. Bunting and Levan: Toxic Reactions of Sulfaguanidine Therapy, *J.A.M.A.* **125**:773-74, June 15, 1944.
7. Cole: Sulfaguanidine Toxicity, *J.A.M.A.* **120**:196, September 19, 1942.
8. Marshall: Sulfaguanidine as a Chemotherapeutic Agent in Intestinal Infarction, *Mississippi Doctor* **20**:4, June, 1942.
9. Dack and Hoskins: *Journal of Infectious Diseases* **72**:11, January and February, 1943.
10. Reed: Acute Adrenal Cortex Exhaustion and Its Relationship to Shock, *American Journal of Surgery* **40**: No. 3, 514, June, 1938.
11. Rhoads, Wolff, Saltonstall and Lee: Experience with Adrenal Cortical Extract in Treatment of Burn Shock, *Annals of Surg.* **118**: No. 6, 982, December, 1943.
12. Massachusetts General Hospital Staff: Management of Cocoanut Grove Burns, *Annals of Surg.* **117**: No. 6, June, 1943.
13. Hartman and Romence: Liver Necrosis in Burns, *Annals of Surg.* **118**: No. 3, 402, September, 1943.
14. Gurd, Ackman, Gerrie, and Pritchard: A Practical Concept for the Treatment of Major and Minor Burns, *Annals of Surg.* **116**: No. 5, 641, November, 1942.
15. Mason: Local Treatment of Burned Areas, *S. G. and O.* **72**: 25, 1941.
16. Siler and Reid: Clinical and Experimental Studies with the Koch Method of Treatment of Burns, *Annals of Surg.* **115**: No. 6, 1106, June, 1942.
17. Brown and McDowell: Skin Grafting of Burns, J. B. Lippincott Co., 1943.
18. Sulfallantoin: Manufactured by Schuylkill Chemical Co., Philadelphia, Pa.
19. Siler: *Southern Medical Journal* **37**:187, April, 1944.
20. Ackman, Gerrie, Pritchard and Mills: A Report on Management of Burns, *Annals of Surg.* **119**: No. 2, 161, February, 1944.
21. McCorkle and Silboni: Selection of Time for the Grafting of Skin to Extensive Defects Resulting from Deep Thermal Burns, *Annals of Surg.* **121**: No. 3, 285, March, 1945.
22. Lund *et al.:* Problems of Protein Nutrition in Burned Patients, *Annals of Surg.* **119**: No. 6, 815, June, 1944.
23. Co Tui *et al.:* The Nutritional Care of Cases of Extensive Burns, *Annals of Surg.* **119**: No. 6, 815, June, 1944.
24. Hardy and McNichol: The Use of Small Pieces of Film-Coated Skin Grafts. *Surgical Clinics of North America,* 281, April, 1944.
25. Zintel: Re-Splitting Split Thickness Grafts with the Dermatome, *Annals of Surg.* **121**: No. 1, 11, January, 1945.
26. Meleney: Infection in Wounds and Burns, *Annals of Surg.* **118**: No. 2, 161, August, 1943.

PNEUMOCOCCIC PNEUMONIA WITH TOXIC NEUTROPENIA SUCCESSFULLY TREATED WITH PENICILLIN A CASE REPORT

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Neutropenia was first described in 1902 by Brown and in 1907 by Türck.[6] In 1922, Schultz described six cases of neutropenia and considered it to be a clinical entity.[6] Since 1922, many cases have been reported. In 1924, Lovett reported the first American case. The syndrome has been referred to by a variety of synonyms, some of which are as follows: agranulocytosis, agranulocytic angina, granulopenia, agranulosis, agranulocythemia, hypogranulocytosis, idiopathic, pernicious or malignant neutropenia or leukopenia. The etiology is imperfectly understood and the disorder represents a symptom complex which may result from a variety of causes. According to Kracke,[5] bacterial toxins may depress granulopoiesis of bone marrow to the point of mild leukopenia but not to complete absence of the granulocytes. Sensitivity or idiosyncrasy peculiar to the individual may be a contributing factor. It is much more frequent among women than among men, the ratio being about two or three to one.[7] It is chiefly a disease of middle age, occurring from fourth to fifth decades. However, no age group is exempt.[5] It seems to be rare in negroes.[6] It is most common in North America and Germany but has been reported from most parts of the world. The prognosis is bad. The mortality rate on statistical basis, as given by some authors, is 70 to 90 per cent.[7]

The case presented in this study is a young colored male. On basis of age, sex and race, he would be classified as belonging to the group where neutropenia is uncommon. His recovery in the presence of severe toxemia, pneumococcic bacteremia (Type XXXIII), chronic alcoholism and toxic neutropenia presents another interesting feature.

CASE HISTORY

F. W., (A-34,725), a 27-year-old colored male was admitted on January 14, 1946, with cough, pain in the left chest and fever. On January 11, 1946, he developed nausea and vomiting. By the following day, pain was present in the left chest, the left upper quadrant of abdomen and he had a productive cough. The pain was increased by respiratory movements. At that time, he had fever but gave no history of having had chills. He had had an upper respiratory infection for about ten days preceding the onset of his present illness on January 11, 1946.

In elicitation of his past history, it was brought out that he had not been well for the past six months. The symptoms and signs during this period were those of malnutrition and alcoholic neuritis. In the latter part of this period (November) he was treated by his physician for cardiac insufficiency. Unfortunately, at that time, no etiological diagnosis of his cardiac insufficiency was made. He had measles in 1928, mumps in 1935, and pertussis in early childhood. There was a history of Neisserian infection in 1935.

He had been a chronic alcoholic for the past ten years and had consumed large amounts of alcohol during the past six months. The drug history was non-contributory to his present illness.

Physical Examination. The arterial blood pressure was 120/85, temperature 103.6° F., pulse rate 100, and respirations were 55 per minute. He was normally developed and a very well nourished 27-year-old colored male acutely ill, in apparent respiratory distress and complaining of pain in the left chest and the left upper quadrant of abdomen. The skin was warm and dry. The pharynx was injected and the voice was very hoarse. The conjunctivae were markedly injected. The tongue was dry and coated. He was coughing frequently and expectorating sputum looking like chocolate syrup. The respirations were rapid and shallow. Respiratory motion of the left chest was restricted. Palpation of the left lower chest wall and the left upper quadrant of abdomen, increased his pain. The physical signs of consolidation were present over the left lower lobe. The abdominal wall was tense and slightly distended. There was slight generalized tenderness over the abdomen but no localized tenderness could be demonstrated. There were no palpable masses or rigidity of the abdominal wall. A diagnosis of lobar pneumonia involving the left lower lobe was made.

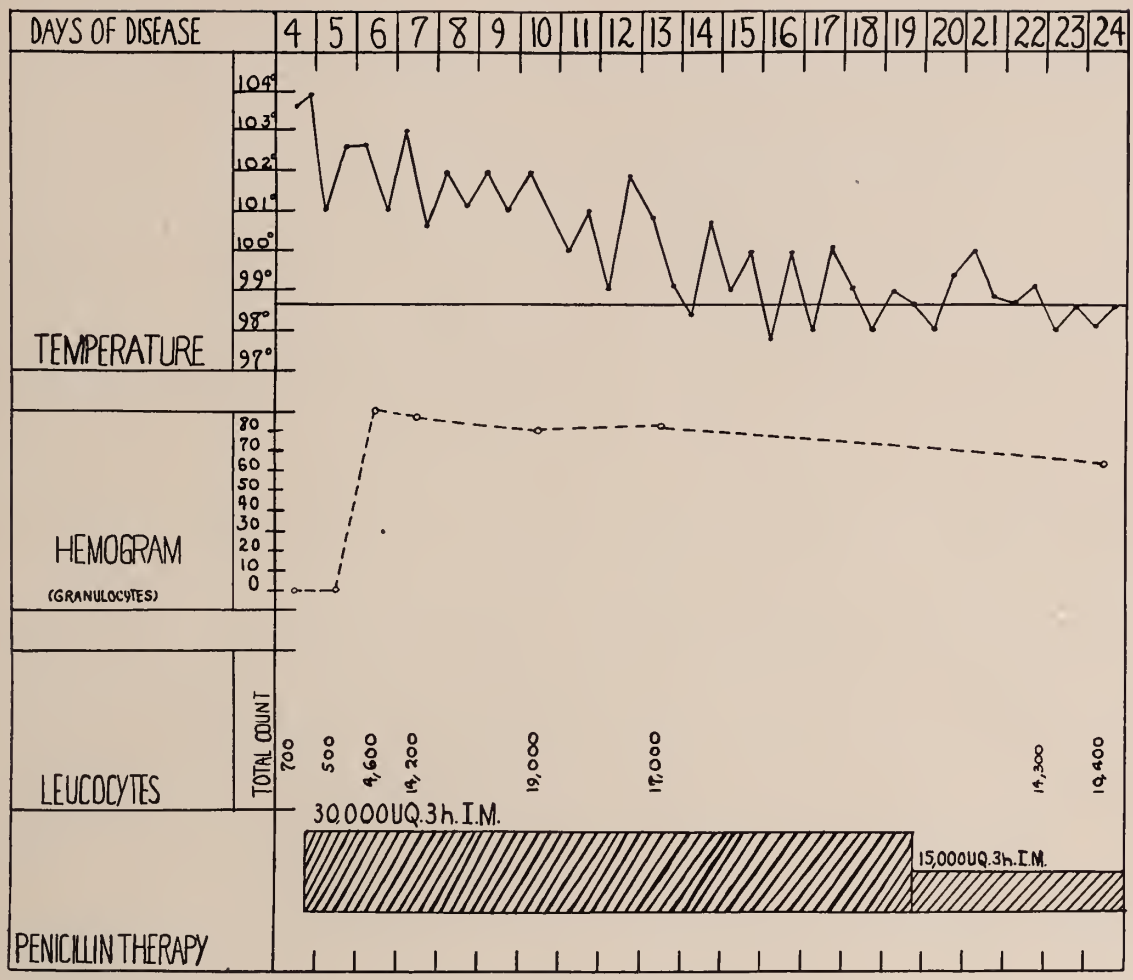

Chart. Illustration showing the continuous remitting fever, total leukocyte count, and penicillin therapy in relation to granulocytic response.

Initial Laboratory Studies. Blood: The total leukocyte count was 700 per cubic millimeter. The hemogram revealed no granulocytes. The erythrocyte count was 4,430,000 per cubic millimeter and hemoglobin (Sahli) was 14.8 grams (87 per cent) per 100 cubic centimeters. The Wassermann reaction was negative. Blood culture was positive for pneumococcus (Type XXXIII). Sputum: Examination of the sputum for pneumococci was negative. It was also negative for Mycobacterium tuberculosis. Urine: The urinalysis revealed a clear urine, specific gravity 1.024, acid reaction, two plus albumin, a few pus cells and numerous hyaline casts and an occasional granular cast.

Clinical Course. On the fifth day of his disease, he was still acutely and critically ill. His condition remained critical for nine days. At the end of this nine day period, he began showing signs of clinical improvement and his recovery was gradual over a period of three weeks. During the last two weeks of his hospital stay, he was convalescing.

His hoarseness and cough with bloody sputum persisted for four weeks. The cough was rather mild and the sputum was streaked with blood during the latter part of this period. He frequently complained of pain in his left chest. Repeated examinations of his sputum for acid fast bacilli were negative. The consolidation, involving the left lower lobe, was slow in resolving and crepitus redux was present at time of discharge from the hospital on the forty-eighth day of his disease. The roentgenogram of the chest at the time of discharge showed that the process of resolution was well established.

The cardiac findings were in no way remarkable during his illness. The electrocardiogram, at time of discharge, was normal. The daily urinalysis re-

vealed a trace of albumin for a period of seven days following his admission. Urinalysis, on twelfth day of his disease, revealed numerous red blood cells. The following day, the urine was free of red blood cells. An endocardial lesion, due to the pneumococcus with emboli to the kidneys, was suspected. However, since there is no other evidence to support this theory other than the shower of red cells in urine, the assumption of an endocardial lesion with emboli to the kidneys would be purely speculative. On the eighth day of the disease, the nonprotein nitrogen was 48 milligrams per 100 cubic centimeters of blood, but returned to normal within six days. Just before leaving the hospital, the Fishberg concentration test revealed a specific gravity of 1.025 and the phenolsulfonphthalein test for kidney function showed an excretion of 90 per cent of the dye in two hours.

The neutropenia persisted up to the third hospital day at which time the total leukocyte count was 4,600 per cubic millimeter and the hemogram revealed segmented neutrophils 63 per cent, stabs 13 per cent, myelocytes 14 per cent and lymphocytes 10 per cent (see chart). He had received, up to this time, 390,000 units of penicillin. There was a mild secondary anemia during the latter part of his illness. The erythrocyte count returned to normal before leaving the hospital. The corrected sedimentation rate, by the Wintrobe method, was 1.0 millimeter per minute (normal: 0.08-0.35 m.m./minute) at the time of discharge. He had no complaints and appeared clinically well when he was discharged from the hospital on the forty-eighth day of his disease.

Therapy. Penicillin was given in doses of 30,000 units intramuscularly, every three hours for 15 days and then 15,000 units every three hours for 24 days. The total amount of penicillin received was 6,255,000 units. Liver extract was given on second hospital day and he received 2 units intramuscularly each day for ten days. A total of 20 units of the crude preparation was given. He was under an oxygen tent for eleven days. The treatment, otherwise, was supportive and symptomatic.

DISCUSSION

The initial dose of sulfadiazine was 4 grams. The initial blood studies revealed a total leukocyte count of 700 per cubic millimeter and the hemogram revealed no granulocytes. Because of the known depressing effect of the sulfonamides on bone marrow in some cases, and the resulting neutropenia, sulfadiazine was discontinued. He received only 4 grams of sulfadiazine which was given after the first blood specimen had been obtained. He was immediately started on penicillin-sodium 30,000 Oxford units intramuscularly, every three hours. The following day, the leukocyte count was 500 per cubic millimeter and the hemogram still revealed no granulocytes. It was decided, at that time, to give liver extract in addition to penicillin because of its known leukopoietic effect. On the third day of therapy, at which time he had received 390,000 units of penicillin, the leukocyte count was 4,600 per cubic millimeter and the hemogram revealed 90 per cent granulocytes (see chart). There was no other cause found to explain his neutropenic reaction other than the severe toxemia from his pneumococcic infection.

COMMENT

The use of sulfonamide drugs and penicillin in neutropenia dates back to 1941. Dameshek and Wolfson[3] recommended a new policy in the therapy of neutropenia in which treatment was directed toward the prevention and control of infection rather than toward the stimulation of leukopoietic activity. The rationale of this new policy was to control the toxemia and infection and allow the bone marrow to take care of itself and recover spontaneously. Before 1942, physicians attempted to stimulate the activity of bone marrow by such well known leukopoietic agents as pentose nucleotide, yellow marrow, liver extract and blood transfusions.[2] In many instances, these methods directed toward bone marrow stimulation were unsuccessful and the mortality rate in cases of neutropenia was high.

Early studies on penicillin revealed that it does not depress the leukocytic activity of bone marrow.[2] Quoting from the article by Boland, Headley and Hench,[2] penicillin acts as a temporary substitute for the phagocytic activity of granulocytes while granulopoiesis is being resumed. Abraham, Chain and their associates,[1] and Herrell and his associates,[4] have successfully treated cases of severe infection and neutropenia with penicillin. The therapeutic results thus far in neutropenia treated with penicillin are very encouraging; however, the number of cases treated is too small to be of statistical value.

VIRGINIA MEDICAL MONTHLY

A case of toxic neutropenia, resulting from the toxemia of pneumococcic lobar pneumonia with pneumococcic bacteremia (Type XXXIII), occurring in a 27-year-old colored male, a known chronic alcoholic, successfully treated with penicillin, is presented. In view of the good results in this case and others, penicillin would seem to be the treatment of choice in neutropenia.

REFERENCES

1. Abraham, E. P., Chain, E., Fletcher, C. M., Gardner, A. D., Heatley, N. G., Jennings, M. A., and Florey, H. W.: *Lancet* **2**:177, 1941.
2. Boland, E. W., Headley, N. E., and Hench, P. S.: *J.A.M.A.* **130**:556, 1946.
3. Dameshek, W., and Wolfson, L. E.: *Am. J. M. Sci.* **203**:819, 1942.
4. Herrell, W. E., Nichols, D. R., and Heilman, D. H.: *J.A.M.A.* **125**:1003, 1944.
5. Kracke, R. R.: Diseases of the Blood, Philadelphia, Lippincot, p. 153, 1941.
6. Wintrobe, M. M.: Tice's Practice of Medicine, Hagerstown, Prior, vol. VI, p. 908, 1940.
7. Wintrobe, M. M.: Clinical Hematology, Philadelphia, Lea & Febiger, p. 645, 1942.

Streptomycin Quotas Lifted.

The Winthrop Chemical Company, Inc., one of the first distributors of the new anti-biotic Streptomycin, announced November 1 that this drug was now available to all hospitals and sanitariums.

Formerly supplied only under allocation by the Civilian Production Administration to selected depot hospitals and other government agencies, although still under government control, Streptomycin may now be ordered direct from Winthrop by all hospitals without restrictions.

As was the case with penicillin, due to limited production in the early days, Streptomycin may not yet be made generally available through drug trade channels, which action will probably follow as soon as supplies are plentiful.

Schenley Appoints Medical Director.

Dr. Adolph G. Kammer, M.D., well-known in industrial medicine and health, has been appointed to the newly-created post of Director of Medical Services of Schenley Distillers Corporation. One of his first projects will be to explore the possibility of coordinating the Company's industrial health program with community medical and health programs in areas in 12 states where Schenley plants are located.

Dr. Kammer also will investigate the feasibility of extending Visiting Nurse Service, now available in several Schenley plant areas, to all of the Corporation's enterprises. Other protective medical and health service possibilities for Schenley employees which will be studied by Dr. Kammer will include physical examinations, and care of the teeth and eyes.

Are You Going to "Be There" at Atlantic City June 9-13, 1947?

Cups and medals are the rewards. Also $34,000 in Savings Bonds for the Special Contest "Courage and Devotion Beyond the Call of Duty" (in war and in peace).

The reward is also professional pride in the achievements of the medical profession in the field of fine art—and also what art can do for you personally—physically, mentally and spiritually. "Art is the best occupational therapy for physicians."

For further information, write: Harvey Agnew, M.D., President, A.P.A.A., 280 Bloor Street West, Toronto 5, Canada, or to F. H. Redewill, M.D., Secretary of the A.P.A.A., or to the sponsor, Mead Johnson & Co., Evansville 21, Indiana, U.S.A.

THE FORUM

Supplemental List of Coroners in Virginia.

In addition to the coroners for various Virginia cities and counties, listed on page 523 of the November MONTHLY, the Commission on Post-Mortem Examinations on October 31 made the following appointments:

CITY	CORONER	ADDRESS
Charlottesville	Dr. Gregory Magruder	Charlottesville
Radford	Dr. Howard Dean	Radford
	Dr. T. L. Gemmill	Radford

COUNTY	CORONER	ADDRESS
Albemarle	Dr. E. D. Davis	Crozet
	Dr. Percy Harris	Scottsville
Campbell	Dr. W. O. Tune	Brookneal
	Dr. R. H. Cross	Concord Depot
	Dr. J. Paul Kent	Altavista
Chesterfield	Dr. P. L. Hill	Colonial Hts.
	Dr. J. F. Parkinson	Chester
	Dr. W. H. Copley	1616 Hull St. Richmond
Halifax	Dr. C. B. White	Halifax
Henrico	Dr. J. C. Lefon	2101 Maplewood Rd.
	Dr. M. B. Lambert, Jr.	Route 12, Richmond
Mecklenburg	Dr. H. H. Braxton	Mathews
	Dr. John R. Gill	Mathews
Montgomery	Dr. A. M. Showalter	Christiansburg
	Dr. C. F. Manges	Blacksburg
Nelson	Dr. Estes Kidd	Lovingston
Roanoke	Dr. Russell Smiley	Salem
	Dr. A. J. Russo	Salem
	Dr. John Hurt	Vinton
Southampton	Dr. T. A. Morgan	Franklin
	Dr. J. J. Grizzard	Branchville
Tazewell	Dr. James Peery	Richlands
	Dr. Rufus Brittain	Tazewell
	Dr. H. A. Porter	Boissevain

McGuire Veterans Administration Hospital,

Richmond, is fortunate in being near enough to the Medical College of Virginia to take advantage of an arrangement—the so-called "Dean's Committee Plan"—whereby faculty members of the school assist in the care of patients and the training of young resident physicians.

Many VA hospitals are operating under the plan. It is part of the revolution in the care of patients within the Veterans Administration which was inaugurated January 3, 1946, when President Truman signed a bill creating within VA the Department of Medicine and Surgery. It is only necessary for the VA hospital to be near to and secure the cooperation of a Class A medical school.

No one is quicker to point to the higher type of medicine and instruction for residents that this plan affords the hospital than McGuire's manager, Dr. Edmund M. Ellerson. Without the services of the Medical College's faculty, he says, the hospital simply could not provide the quality of medicine that it now does.

In this instance the Dean's Committee is composed of five leading medical authorities at the Medical College, plus Dr. James P. Baker, who in the absence of a dean at the school, discharges the duties of acting chairman of the committee. Other members of the committee are Dr. I. A. Bigger, Dr. W. B. Porter, Dr. James Smith, Dr. Dewey Davis and Dr. Carrington Williams.

This powerful group selects and recommends for appointment by VA the consultants and attending men who will visit the hospital in an advisory capacity, and the resident physicians at the hospital. It even concurs in the appointments of the more permanent members of the hospital staff, including the senior medical officers.

Consultants, under the Dean's Committee Plan, are outstanding medical authorities, usually of professorial rank. They visit the hospitals once each week or ten days and advise on the treatment of patients and the training of resident physicians. They are paid by the Veterans Administration on a fee basis. Their appointments are permanent.

Attending men are usually faculty members at cooperating schools. They make up to five visits a week to the VA hospitals, also in an advisory capacity. They are paid on a fee basis; their appointments are for six months and are renewable. They are all diplomates of their various specialty boards.

Cooperating in the McGuire program are eleven consultants and thirty-six attending men from the Medical College. Training under the guidance of these visiting physicians are 39 resident physicians

at the hospital. And of course there are other regular physicians permanently on duty on the staff of the hospital.

The consultants under the program at McGuire are: *Medicine*—Dr. James P. Baker, Dr. Charles M. Caravati, Dr. T. Dewey Davis, Dr. William B. Porter, and Dr. James H. Smith; *Surgery*—Dr. I. A. Bigger, Dr. A. Stephens Graham, Dr. Guy W. Horsley, Dr. Harry J. Warthen, Dr. Carrington Williams, and Dr. C. C. Coleman.

Attending men are: *Medicine*—Dr. R. D. Bates, Jr., Dr. James O. Burke, Dr. Edward A. Delarue, Jr., Dr. Sidney G. Page, Jr., Dr. M. Morris Pinckney, Dr. Reno R. Porter, Dr. Wellford C. Reed, Dr. W. Taliaferro Thompson, Jr., Dr. Elam C. Toone, Jr., Dr. H. St. George Tucker, Jr., Dr. Gilman R. Tyler, Dr. George A. Welchons, and Dr. Alexander G. Brown, III; *Surgery*—Dr. Frank Philip Coleman, Dr. William R. Hill, Dr. William A. Johns, Dr. John R. Massie, Jr., Dr. Benjamin W. Rawles, Jr., Dr. R. C. Siersema, and Dr. Duval Watts; *Medical Specialties*—Dr. R. Campbell Manson and Dr. Allen Pepple (dermatology and syphilology); Dr. P. H. Drewry, Jr., (neuropsychiatry); *Surgical Specialties*— Dr. Seymour Schotz (anesthesia), Dr. Edwin Rucker (gynecology), Dr. C. E. Troland (neuro-surgery), Dr. E. W. Perkins and Dr. L. B. Sheppard (ophthalmology), Dr. R. D. Butterworth, Dr. B. B. Clary, Dr. W. M. Deyerle and Dr. T. Wylie Hodges (orthopedics), Dr. George C. Williams (pathology), and Dr. Marshall P. Gordon, Jr., (urology).

Penicillin as Preventive of Bacterial Endocarditis.

Penicillin has been revealed as an effective agent in preventing one of the most deadly forms of heart disease known as subacute *bacterial endocarditis,* an infection which occurs in patients who have rheumatic heart disease. Prior to the advent of penicillin this disease was practically always fatal. Almost one-half of the cases of this infection develop after a tooth extraction or an operation on the upper air passages.

Drawing upon recent medical research, the American Council on Rheumatic Fever, of the American Heart Association, has advocated that all persons suffering from rheumatic fever or rheumatic heart disease receive treatment of penicillin before having a tooth extracted or undergoing any other operation on the upper respiratory tract.

Stressing the need for national education on this new use for penicillin, Dr. Homer F. Swift, Chairman, declared at the Council's annual meeting recently that "bacterial endocarditis is a serious infection of the heart valves and is caused by one of the streptococcus germs commonly known as 'green strep', which is always present in the mouth and air passages. When a tooth is extracted," he added, "the bacteria enter the blood stream and grow on one of the heart valves previously damaged by rheumatic fever.

"If the patient receives penicillin prophylaxis prior to the extraction of a tooth, or any mouth or throat operation, the disease can be prevented. Where this is not done, and the disease develops, penicillin administered in large doses and over a long period of time can cure the majority of cases."

Members of the American Council on Rheumatic Fever, representing medical organizations, public health agencies, social workers, and child care groups, approved a policy calling for an informational campaign directed at physicians and dentists as well as the general public regarding the value of this preventive use of penicillin. Dentists will be urged to avoid extracting teeth of patients having rheumatic heart disease unless penicillin has first been administered. Physicians will be asked to cooperate in providing such treatments, and in informing parents of the need for penicillin therapy before any surgery is performed on the nose or mouth of a patient with a record of rheumatic heart disease.

"It is our objective," Dr. Swift said, "to urge all patients now listed on a rheumatic fever registry in any community to consult first with their physicians on the possibility of penicillin treatment prior to any operation. If this procedure is instituted in the community rheumatic fever program, cases and deaths from bacterial endocarditis will be prevented."

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for October 1946, as compared with the same month in 1945, and for the period of January through October, 1946, compared with the same period in 1945, follows:

	Oct. 1946	Oct. 1945	Jan.-Oct. 1946	Jan.-Oct. 1945
Typhoid and Paratyphoid	6	24	104	153
Diarrhea and Dysentery	139	584	2,462	6,812
Measles	57	25	12,945	1,280
Scarlet Fever	184	390	2,359	3,292
Diphtheria	74	121	418	353
Poliomyelitis	16	38	102	321
Meningitis	10	4	188	202
Undulant Fever	4	4	53	30
Rocky Mountain Spotted Fever	2	1	91	93
Tularemia	2	2	52	40

DRIED HUMAN BLOOD PLASMA

Early this year the Armed Forces declared a quantity of dried human blood plasma surplus, and this plasma was returned to the custody of the American Red Cross. This organization then devised a plan by which this surplus product could be distributed to all hospitals and physicians throughout the country. Each State Health Department received a shipment of plasma for redistribution to physicians. In Virginia the initial distribution was accomplished in March, and physicians and hospitals received quantities according to a fixed scale.

Since that time the Virginia Health Department has continued to maintain a supply of the plasma, and has replenished hospitals and physicians as they used the initial amount received. To date, in excess of 8,000 packages have been distributed.

The American Red Cross has, as yet, a surplus of the plasma and urges that physicians be not reticent in using it, as a large quantity of the product has an expiration date of October, 1947. Therefore, if it is not used it may have to be discarded.

There is one stipulation made by the American Red Cross in furnishing this adjuvant of therapy, and that is that no charge be made to the patient for the plasma. As the stock pile was built up through the generosity of the American people, it is felt that they should not be charged for what they have given.

The supply of dried plasma in storage is bountiful and of an early expiration date. Therefore, the physicians of Virginia are urged to make use of this blood fraction whenever indicated.

In order to replenish supplies, address your request to the Virginia State Department of Health, Richmond, Virginia.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

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President-Elect — MRS. J. L. DECORMIS, Accomac
Recording Secretary — MRS. M. H. HARRIS, West Point
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Inaugural Address.

The Woman's Auxiliary to the Medical Society of Virginia was organized 24 years ago to serve the medical profession, and this year Dr. W. L. Powell, President of the Medical Society of Virginia, is calling upon every member of our Auxiliary to render a real service. I will read in part from a letter I received from him. I quote: "Regarding the work of the Woman's Auxiliary, I feel that the most important thing is for *you all* to become voluntary members of the Public Relations Committee and try to let your friends and the general public know what it would mean if and when some form of

socialized medicine is wished upon us. I feel that the laymen really do not have any idea what would be the result to them should the profession, as well as the laymen, be regimented under the federal government."

For some time there has been a rising agitation for a change in the order of medical care. The war has intensified this clamor. The development of prepayment medical care plans probably offers the only choice we have of defeating legislation leading to government control of medicine. However, the development of this plan is not being fostered simply as a means of defeating such bills, but rather in response to a need for better distribution of medical care in the United States under an insurance program that makes it possible for the low income groups to have hospital and medical care at cost within their means. In this connection we are all urged to be familiar with the Ten Point Program of the American Medical Association, the Blue Cross Plan and the Virginia Plan for Medical Care.

There is a great probability that some of the basic issues dropped by the 79th Congress may be picked up and carried through by the 80th Congress when it convenes in January. Whether the subject of compulsory health insurance, as provided in President Truman's National Program, and the Wagner-Murray-Dingell Bill will be among these issues at present is a matter of conjecture. This fall Congressmen and Senators will be elected. Next fall our State Representatives will be elected. It is significant that greater concern must be exercised by the voters about the aspirants to office, if American liberties and traditions are to be preserved. Congressmen, as representatives of their constituents, are expected to heed their wishes. It follows if there is confusion in the minds of the people, it may be reflected in the action of their legislators. There always exists the urgent need to educate the public on the issues presented. It is not the policy of the Woman's Auxiliary to participate in political activities. However, as alert citizens, Auxiliary members can help insure the freedom, the health and welfare of the nation.

No one doubts the importance of public opinion. Whose fault is it if that opinion is directed in the wrong way? Are we, as doctor's wives sufficiently well informed ourselves, so that we may politely, but firmly, refute a false statement when that statement is presented within our hearing? Let each and every member feel that responsibility so keenly that she makes a determined effort to acquire the knowledge and information which is needed. Only in that way can the Auxiliary as a whole render real service to the medical profession and to the communities in which they exist.

In the health education phase we should give an important place to cancer control.

Our subscriptions to *Hygeia* have increased, but each County Auxiliary should work diligently to place this magazine in every doctor's office, in the school libraries, in public reading rooms, and in every home possible. Through *Hygeia* we can bring to the public authentic information on matters of health, legislation and allied subjects. It is our best medium of health education.

The value of the *Bulletin* as a working magazine must be emphasized. Last year, through the efforts of Mrs. West, the subscriptions were greatly increased. It is the aim of our *Bulletin* Chairman that every Auxiliary member be a subscriber to the *Bulletin* this year. Through its pages we keep informed on the activities of our own organization.

It is well for us to realize that our value as an organization increases with our activities, as individuals, in lay groups. Organization and membership go hand in hand. To increase our membership is to increase our potential influence.

LOUISE J. HAMNER (MRS. J. E.)
President, Woman's Auxiliary,
Medical Society of Virginia

Northern Neck.

The regular meeting of this Auxiliary was held on October 24th in Warsaw at the home of Mrs. Paul Pearson, president. There were ten members in attendance and five new members were enrolled. A report of the state meeting was given, as were reports from the various chairmen. Mrs. C. Y. Griffith was chosen to serve as chairman for the *Bulletin*.

In spite of this being only the second meeting of this Auxiliary, it now has a membership of fourteen enthusiastic members.

The group was disappointed that it was impossible for the speaker of the day, Mrs. Powell Williams, State Legislative Chairman, to be present. A poem, "The Doctor's Wife", was read by Mrs. Pearson.

After a turkey dinner at the Virginia Grill, the meeting adjourned to meet again in May at Kilmarnock.

ELIZABETH LITSINGER,
Editorial Chairman

Richmond.

The Auxiliary to the Richmond Academy of Medicine held a Get-Acquainted Bridge Party at the Academy Building on October 18th, this being limited to members and those eligible for membership. Mrs. J. H. Scherer was chairman of the party and had as her assistants, Mrs. George Thrift, refreshments, and Mrs. L. James Buis, chances. A Smithfield ham and a pair of nylon stockings were raffled, and sherbert punch and cookies were served.

MYRTLE MORTON (MRS. W. R.)
Chairman, Press and Publicity

Arlington.

The first regular meeting of the Arlington Auxiliary was held at the Arlington Hospital on September 22nd. There were 26 members present. At this time the Constitution and By-Laws were voted on and passed. It was voted that the meetings would be held on the first Thursday of each month at the Washington Golf and Country Club at 8:30 P.M.

ELEANOR C. DETWILER (MRS. ROBERT H.)
Chairman, Press and Publicity

Norfolk.

A general meeting was held on October 29th in the Library of the Medical Arts Building, Norfolk.

Mrs. Charles Lupton was unanimously elected president and Mrs. K. W. Howard, president-elect. Other officers elected were: vice-presidents, Mrs. John R. St. George; Mrs. M. F. Brock; and Mrs. W. C. Salley; recording secretary and assistant, Mrs. Thomas Spessard and Mrs. P. B. Parsons; treasurer and assistant, Mrs. Mallory Andrews and Mrs. Marvin Herrington; corresponding secretary and assistant, Mrs. W. L. Taliaferro and Mrs. Ben Steingold; historian, Mrs. James Anderson; and parliamentarian, Mrs. T. Elmore Jones.

The slate was presented by Mrs. Southgate Leigh, Jr., as chairman of the Nominating Committee. The officers were installed by Mrs. C. C. Smith, whose resolution expressing appreciation for the leadership of Mrs. C. M. McCoy, the retiring president, and for the work of all retiring officers, responsible for the success of the auxiliary through the year, was adopted with a rising vote of thanks.

Upon assuming office, Mrs. Lupton urged all members to work toward becoming informed members and to help others to be informed especially in proposed legislation affecting the doctors and the health of the nation, and what is most important to give assistance to the doctors whenever asked.

She named as chairmen of the standing committees; Mrs. Walter P. Adams, *Bulletin*; Mrs. R. M. Reynolds, health education; Mrs. K. K. Wallace, *Hygeia;* Mrs. Lemuel Mayo, Jane Todd Crawford Memorial; Mrs. W. C. Salley, public relations; Mrs. W. R. Tyson, Norfolk United Fund; Mrs. Southgate Leigh, Jr., social; Mrs. W. E. Butler, birthday; Mrs. Albert Horton, courtesy; Mrs. John R. St. George, membership; Mrs. Ben Steingold, press and publicity; Mrs. Starke Sutton, telephone; Mrs. Mallory Andrews, finance; Mrs. E. Ray Altizer, legislation; Mrs. St. George, advisory; Mrs. M. K. King and Mrs. W. P. Sellers, guests; and Mrs. H. W. Rogers, revisions.

Mrs. Smith reported the recent meeting of the Auxiliary to the State Society.

The meeting opened with a Memorial Service conducted by Mrs. Lupton to Mrs. Frank Redwood, Mrs. Edwin Baird, Mrs. G. R. Berkeley, and Mrs. W. P. McDowell, who died during the year.

CLARA P. BROCK (MRS. M. F.)
Chairman, Press and Publicity

PROCEEDINGS
MEDICAL SOCIETY OF VIRGINIA

ANNUAL MEETING
Virginia Beach
October 14, 15, 16, 1946

The Medical Society of Virginia held its annual meeting at The Cavalier, Virginia Beach, Virginia, on Monday, Tuesday, and Wednesday, October 14, 15, and 16, 1946, all general sessions and scientific sessions being held in the ballroom.

First Scientific Session

The First Scientific Session convened in the ballroom of The Cavalier on Monday afternoon, October 14, 1946, at three o'clock, with Dr. J. L. Rawls, of Norfolk, the President, presiding.

President Rawls called the meeting to order, and the program was begun with the reading of the paper of Dr. Millard B. Savage, Norfolk, on "Occiput Posterior and Its Treatment". This was read by Dr. Savage and discussed by Dr. Waverly R. Payne, of Newport News.

Dr. George A. Wright, of Marion, read his paper entitled "Complicated Surgery of the Abdomen with Special Reference to Anesthesia, Drainage, Pre- and Post-Operative Care, with Case Reports" (illustrated by lantern slides), which was discussed by Drs. J. Coleman Motley, Abingdon; A. M. Showalter, Christiansburg; T. J. Hughes, Roanoke; and M. B. Hiden, Warrenton; and in closing by Dr. Wright.

President Rawls spoke as follows: "The program calls for a recess at this point to visit the exhibits, but because we are running late we will go right ahead with the papers.

"It is no secret that a good deal of the expense of our convention is taken care of by the exhibitors, because they pay for their space. I hope you will visit them and sign their cards, so they can show to their companies that the members of the Society did manifest interest in the exhibits."

The paper of Drs. Frank S. Johns and William A. Johns, of Richmond, entitled "Cancer of the Colon and Rectum, Emphasizing Aseptic Primary Anastomosis for Lesions of the Colon" (illustrated by lantern slides), was read by Dr. William A. Johns.

President Rawls, stating that the next paper on the program was on a similar subject, called for it; and Dr. A. Stephens Graham, of Richmond, read his paper entitled "Current Trends in Surgery of the Colon and Rectum for Cancer". The two papers were then discussed by Drs. J. M. Emmett, Clifton Forge, and R. L. Payne, Norfolk, and in closing by Dr. William A. Johns.

Dr. Harry J. Warthen, Jr., of Richmond, read his paper entitled "The Need for Trained Medical Anesthetists in Virginia", which was discussed by Drs. E. C. Drasch, Charlottesville; Frank S. Johns, Richmond; R. L. Payne, Norfolk; S. Schotz, Richmond; and Everett Idris Evans, Richmond.

The President announced a change in the program in that Dr. Charles Hamilton Lupton's paper on "The Treatment of Burns" would be given on Tuesday and that of Dr. Everett Idris Evans at this time. Dr. Evans then presented his subject, "Surgical Treatment of Hypertension and Peripheral Vascular Disease" (illustrated by lantern slides), which was discussed by Dr. Nathan Bloom, Richmond, and Dr. W. S. Lloyd, Goochland, and by Dr. Evans in closing.

The program having been concluded, the afternoon session adjourned, at 6:10 o'clock p. m.

General Session

MONDAY EVENING, OCTOBER 14

The Medical Society of Virginia convened in general session in the ballroom of The Cavalier, Virginia Beach, on Monday, October 14, and was called to order at 8:30 p. m. by Dr. A. Brownley Hodges, of Norfolk, Chairman of the Committee on Arrangements, who spoke as follows:

"Mr. President and members of the Medical Society of Virginia and guests, as Chairman of the Committee on Arrangements it is my pleasant duty to open the evening session of this convention. On behalf of our Committee, I am glad to welcome you to Virginia Beach. I hope that you will have a most enjoyable and successful meeting here.

"The invocation will be delivered by the Reverend Charles W. Carnan, Jr., of the Galilee Episcopal Church, Virginia Beach."

REV. CHARLES W. CARNAN, JR.: In the name of the Father and of the Son and of the Holy Ghost, amen.

Almighty God, we humbly beseech Thee to bless us as we join together in this convention. We pray that Thou wilt strengthen our minds in research and medical arts and that Thou wilt direct and guide us as we apply our knowledge and our science to the cure of souls. We humbly pray Thee that Thou wilt direct all research in medicine by doctors and nurses throughout the world. In the name of Christ, the great Saviour and Physician of Souls, we ask this. Amen.

Chairman Hodges made some announcements about the tickets for the special luncheons and the banquet and then introduced the President of the Society.

PRESIDENT JULIAN L. RAWLS: Mr. Chairman, ladies, and gentlemen, I am sure all of you know me well enough to take with a grain of salt any introductory speech Dr. Hodges may make. Nevertheless, I appreciate it.

I want to thank you, too, for the great honor you have

done me. The burden has been considerably lessened and the work made a pleasure because of the help I have had from the officers and members of the Society, and particularly from the Executive Secretary and her assistant. They have taken practically all the load from my shoulders and have made the responsibility quite a pleasure.

The President then read his address, entitled "The Physician's Responsibility to His Community". (Published in the November issue of the MONTHLY.)

PRESIDENT RAWLS: I am going to ask Dr. Showalter to read the names of those members of our Society who have passed away since we last met.

DR. A. M. SHOWALTER, Christiansburg, Chairman Membership Committee: I should like to ask your most careful attention as I read this list, to the end that if any names have been omitted you may present them to our Executive Secretary after the meeting is over.

There are three names included in this list of members who died in the Service.

Chairman Showalter then read the list of deceased members.

Members Whose Deaths Have Been Reported Since 1945 Meeting

Dr. John Newton Dunn (Major, M.C.), Blackstone, September 3, 1945.
Dr. Hugh Carter Henry, Richmond, October 14, 1945.
Dr. Frederick Gochnauer, Upperville, October 9, 1945.
Dr. James Louis Early, Saltville, September 1, 1945.
Dr. Francis Whittle Upshur, Richmond, October 25, 1945.
Dr. Frank Cyrus McCue, Charlottesville, December 1, 1945.
Dr. Edward McCarthy, Richmond, November 29, 1945.
Dr. Archibald McDowell Burfoot, Norfolk, November 25, 1945.
Dr. Casper Otto Miller, New Market, December 16, 1945.
Dr. Everett A. Land, Norfolk, October 30, 1945.
Dr. Claiborne Willcox, Norfolk, December 30, 1945.
Dr. Houston Robinson Farley, Pulaski, June 20, 1944.
Dr. Henry Magruder DeJarnette, Fredericksburg, February 18, 1946.
Dr. Ashby Turner, Harrisonburg, November 16, 1945.
Dr. Charles William Rodgers, Jr., Alexandria, October 9, 1945.
Dr. Ossie Alexander Weatherly, Bluefield, West Virginia, November 27, 1945.
Dr. John James Board, Rustburg, December 30, 1945.
Dr. William Isaac Robey, Herndon, October 5, 1945.
Dr. Robert Pinckney Fagge, Axton, March 19, 1946.
Dr. John Shelton Horsley, Richmond, April 7, 1946.
Dr. Maryus Curtis Oldham, Lancaster, February 27, 1946.
Dr. Moses Peter Rucker, Bedford, April 4, 1946.
Dr. Richard Henry Cobb, Franklin, January, 1946.
Dr. Spencer Glas Gill, Norfolk, May 17, 1946.
Dr. John Morgan Biedler, Harrisonburg, January 26, 1946.
Dr. Stephen Roszel Donohoe, Norfolk, March 13, 1946.
Dr. William Curtis Gibson, Suffolk, June 10, 1946.
Dr. Thomas Bascom Ely, Jonesville, May 6, 1946.
Dr. Thomas Sheppard Richardson, Waynesboro, July 6, 1946.
Dr. Alexander L. Martin, Jr., Richmond, July 17, 1946.
Dr. Homer E. Clarke, Massies Mill, May 31, 1946.
Dr. James Harmanson Mapp, Buena Vista, July 31, 1946.
Dr. John Daniel Thomas, Washington, D. C., August 7, 1946.
Dr. James Edwin Smith, Petersburg, August 15, 1946.
Dr. Quintus Harper Barney, Altavista, July 16, 1946.
Dr. Robert Lee Schuler, Broadway, August 17, 1946.
Dr. Daniel Edward Remsberg, Roanoke, September 14, 1946.
Dr. Rosser Noland Hillsman (In Service), Amherst, August 31, 1945.
Dr. Max Leonard Holland (In Service), November 9, 1945.
Dr. James McCaw Tompkins, Richmond, August 23, 1946.
Dr. Raymond William Paul, Richmond, September 22, 1946.
Dr. E. N. Lillard, Madison, October 9, 1946.

Upon request of the President, the audience then stood for a minute in respect to the memory of the departed members.

The President then said:

This Society has been honored by the appointment of delegates from other bodies to this meeting. I am not sure whether any of them are here tonight, but I am going to call their names and ask any of them who are here to rise.

The delegates from the Medical Society of the State of North Carolina: Dr. J. E. Smith, Dr. H. B. Ivey, and Dr. Moir S. Martin.

Delegates from the Virginia State Dental Association: Dr. J. L. Walker and Dr. T. L. Brooks.

Delegates from the Virginia Pharmaceutical Association: Mr. A. L. I. Winne, Mr. R. L. Ives, and Mr. E. B. Truitt.

Gentlemen, we are very glad to have you here. We hope you will attend the scientific meetings, and if anything of interest to you comes up we shall be glad to have you take part in the discussions.

Two years ago something very interesting took place. At that time the American Medical Association decided to open an office in Washington. Before that we had very little information about what was going on. Frequently we knew nothing at all about some matter that was pending until we saw in the newspapers that something had been done—often something quite inimical to our profession. So the American Medical Association decided to open an office of information in Washington. I do not know quite what the classification of the gentleman in charge there is; I do not know whether he has registered as a lobbyist or will be required to register as one. But I believe he knows better what is going on in Washington than any other doctor in America. He keeps his finger on legislation. I recall one occasion on which he knew that a certain matter was coming up to be heard by a certain committee apparently even before the chairman of the committee knew about it. He is here tonight to talk to us, and he tells me that he is going to speak on the rather startling disclosure that forty per cent of the counties in the United States have no hospitals. I now take great pleasure in introducing to you Dr. Joseph S. Lawrence, Director of the Council on the Medical Service and Public Relations of the American Medical Association.

DR. JOSEPH S. LAWRENCE: Mr. President, ladies and gentlemen—It is a great honor for me to address you, and

I assure you I do it with deep humility. I hope I shall be able to give you something that will be as worthy of your attention as what I have gained today in visiting your members.

May I take this occasion to congratulate you and your Society upon the splendid program in public relations that you are now developing. It is so good that I suspect the ladies of the Auxiliary have had a hand in it. I heard today a brief sketch of a program that some of your number are working out for carrying medical services to the rural residents of your State, which I think cannot be surpassed. I am going to keep a close watch on it, because if it does work out I do not see why it should not be carried to other sections of the country.

Dr. Lawrence then read his address. (Published in this issue of the MONTHLY.)

PRESIDENT RAWLS: Ladies and gentlemen, several months ago your Council appointed a committee to discuss with the Federal Veterans Bureau Administration what form of provision we should make for the care of veterans in Virginia, and that committee is still negotiating with the Veterans Bureau. It has drawn up a fee scale which we hope the Veterans Bureau will accept and which we hope to give you as an accomplished fact very shortly. We wrote General Hawley and asked if he could send some member of the Veterans Administration staff down here to tell us more about the program for the medical care of the veterans. We were more fortunate than we had hoped, because he sent someone who not only is familiar with that subject but who knows our State. Dr. E. C. Harper, Assistant Director of the Tuberculosis Section, Veterans Administration, Richmond, is here and is going to talk on the subject of "Medical Service Second to None". When he has finished speaking he is going to show a sound movie which will run about twenty-five minutes, and we shall be glad for all of you to stay and see it. I now present Dr. Harper.

Dr. Harper read his paper entitled "Medical Service Second to None" and then showed a moving picture, after which the evening session adjourned.

Tuesday, October 15
Second Scientific Session

The Medical Society of Virginia convened in the ballroom of The Cavalier, Virginia Beach, on Tuesday morning, October 15, 1946, at nine-twenty-five a. m., with Dr. W. L. Peple, Vice-President, presiding.

Dr. Russell Buxton, of Newport News, read his paper entitled "Unusual Tumors of the Abdomen", which was discussed by Drs. A. A. Creecy, Newport News; Joseph Coates, Galax; John Powell Williams, Richmond; Vice-President Peple; and by the essayist in closing. (Dr. Peple's discussion illustrated by three lantern slides.)

Dr. Charles Hamilton Lupton, Norfolk, read his paper on "The Treatment of Burns" (illustrated by lantern slides). In the absence of Dr. Everett Idris Evans, of Richmond, his discussion of Dr. Lupton's paper was read by Dr. Randolph H. Hoge, Richmond; and the paper was then discussed by Dr. J. G. Price, Norfolk; Dr. Russell Buxton, Newport News; and in closing by Dr. Lupton.

Dr. Frank Philip Coleman, Richmond, read his paper entitled "Primary Cancer of the Lung" (illustrated by lantern slides). This was discussed by Dr. Arthur B. Gathright, Richmond; Dr. E. C. Drasch, Charlottesville; and Dr. I. A. Bigger, Richmond; with the essayist closing the discussion.

Dr. E. E. Barksdale, of Washington, D. C., read his paper on "Penicillin in Syphilis", which was discussed by Drs. Thomas Murrell and E. M. Holmes, of Richmond; Dr. Joseph Coates, Galax; and in closing by Dr. Barksdale.

The paper of Drs. George A. Welchons and E. L. Kendig, of Richmond, entitled "Lung Abscess in Infants and Children: Treatment with Penicillin" (illustrated by lantern slides), was read by Dr. Welchons and was discussed by Drs. I. A. Bigger, Richmond; E. C. Drasch, Charlottesville; Dr. Kendig; and by Dr. Welchons in closing.

Dr. John F. Williams, Richmond, read his paper entitled "Practice of Psychosomatic Medicine" (illustrated by lantern slides). This was discussed by Dr. Howard Masters, Richmond; Dr. T. Dewey Davis, Richmond; and in closing by the essayist.

The program having been completed, the morning session then adjourned.

Tuesday Afternoon
Third Scientific Session

The Society reconvened in the ballroom and was called to order at three-twenty-five p. m. by Dr. J. D. Hagood, of Clover, Vice-President, who presided.

Preceding the reading of papers, Dr. E. M. Holmes, Jr., Director of the Bureau of Venereal Disease Control of the State Department of Health, had arranged for the presentation of a film on The Use of Penicillin in Medicine, Surgery, and in the Treatment of Venereal Diseases, and this was presented through the courtesy of E. R. Squibb and Sons. It was announced by Dr. Charles Mann of that Company.

The paper of Drs. Charles M. Caravati and James M. MacMillan, of Richmond, on "Obscure Hematemesis: Gastroscopy, an Aid in Its Diagnosis" (illustrated by lantern slides), was read by Dr. Caravati and was discussed by Dr. D. Coleman Booker, Richmond, and Dr. T. Dewey Davis, Richmond.

The paper entitled "Infectious Hepatitis", by Drs. M. Morris Pinckney, James O. Burke, Jr., W. Taliaferro Thompson, and H. St. George Tucker, was read by Dr. Pinckney. (Illustrated by lantern slides.) Dr. John Powell Williams, of Richmond, discussed it, with Dr. Tucker closing.

The paper of Drs. John L. Guerrant and Oscar Swineford, Jr., of University, entitled "The Coseasonal Treatment of Hay Fever" (illustrated by lantern slides), was

read by Dr. Guerrant and was discussed by Dr. J. Warrick Thomas, of Richmond, and by Dr. Guerrant in closing.

The paper of Drs. R. Finley Gayle, Jr., and Claude L. Neale, of Richmond, entitled "The Present Status of Shock Therapy" (illustrated by lantern slides), was read by Dr. Neale and was discussed by Dr. Joseph E. Barrett, of Williamsburg.

Dr. James L. Thomson, of Norfolk, read his paper on "The Diagnosis and Treatment of Herniated Nucleus Pulposus" (illustrated by lantern slides), which was discussed by Dr. J. M. Meredith, Richmond.

The paper of Drs. Paul D. Camp and Louise Galvin, Richmond, entitled "Severe and Fatal Rheumatic Fever with Pancarditis in Virginia", was read by Dr. Camp and was discussed by Dr. Samuel A. Anderson, Jr., Richmond, and Walter B. Martin, Norfolk, and by Dr. Camp in closing.

The program having been completed, the afternoon session adjourned at six-fifteen p. m.

Tuesday Evening—7:00 P. M.

Following the banquet held in The Cavalier dining room, Dr. George F. Lull, Secretary and General Manager of the American Medical Association, guest of the Society, gave a most interesting talk on Activities of the American Medical Association. Upon adjournment, members of the Society and their guests enjoyed dancing in the ball room.

Wednesday, October 16
Closing Session

The Society convened in the ballroom of The Cavalier on Wednesday morning, October 16, for its closing session and was called to order by President Julian L. Rawls at ten o'clock. President Rawls then said:

"Gentlemen, I have a word of explanation about your program. At the last meeting someone made the remark that the papers were not intended for the general practitioner but were largely papers along the lines of certain specialties. So your Program Committee decided that they would put on a symposium of papers at one session which would interest the general practitioners.

"I also wish to explain to you that when the customary card was sent out for members of the Society who desired to present papers to notify the Secretary we had an excelllent response—in fact, too excellent to accept all the papers, because we knew we had auditorium space down here for only one section and that we could not divide up into a medical section and a surgical section and a pediatric section. There is only this room that we can use. We got responses from thirty-seven members who were willing to present papers, and the Program Committee had the task of selecting from that number seventeen, which is all we have time for. The Program Committee, therefore, had to choose the papers which they felt would be most interesting to the general practitioner and not those strictly along the lines of some specialty. I hope those of you who offered papers that were not used will submit them to the JOURNAL, so that they may be published and the members of the profession in Virginia may have the benefit of them. I also hope that the fact that your paper was not placed on the program this year will not deter you from offering others in the future.

"The papers in the symposium will now be read, and after the reading I hope there will be time for a general discussion."

The following papers, comprising the Symposium on General Practice, were read:

"Pediatric Goals for the General Practitioner", by Dr. Basil B. Jones, Richmond.

"Can Obstetric Care Be Improved?", by Dr. A. L. Carson, Richmond.

"Orthopedics as It Relates to the General Practitioner", by Dr. George A. Duncan, Norfolk.

"Neuropsychiatry as It Relates to the General Practitioner", by Dr. J. R. Blalock, Marion.

"Hypertensive Vascular Disease: Its Evaluation and Management", by Dr. Julian R. Beckwith, Clifton Forge.

"Laboratory and Diagnostic Methods of Interest to the General Practitioner", by Dr. Walter B. Martin, Norfolk.

The papers in the symposium were discussed by President Rawls; Dr. Joseph Coates, Galax; Dr. John F. Williams, Richmond; and in closing by Dr. Jones.

PRESIDENT RAWLS: Gentlemen, we come to a parting of the ways, you and I, so far as my official position is concerned. I want to take this opportunity of reiterating the statements I made on Monday of my very deep appreciation to the central office and to the Council and to the members of the various committees for relieving me to a very great degree of the burdens that necessarily accompany this office, and I assure you that I am very deeply appreciative of the honor of occupying the presidency for the past year.

It gives me a great deal of pleasure to turn over this gavel to the doctor who succeeds me, because I feel he is much more able to carry on the work than I have been and I know your association is in good hands. I commend particularly the Department of Public Relations. I regret exceedingly that I had only six months with that, while he is going to have twelve. I think the possibilities of what that department can do for the future of medicine in Virginia are very great.

I ask Dr. Preston and Dr. Caudill to escort Dr. Powell to the platform.

It gives me a great deal of pleasure, Dr. Powell, to turn this gavel over to you, with all the significance it carries and all the possibilities of good that go with it.

PRESIDENT W. L. POWELL: Mr. Chairman and members of the Medical Society of Virginia, if I can only be half as efficient as Dr. Rawls I think I shall be satisfied. He has done a wonderful job.

I realize what a great honor it is to become President of the Medical Society of Virginia and I accept this

office with a deep feeling of humility and gratitude to my friends who have conferred this honor upon me. I also realize the great responsibility involved and will endeavor to fill this office to the best of my ability. I am fortunate in having a fine Council to work with me and the benefit of the advice of Dr. Rawls, Past President, and Dr. Fisher, President-Elect.

We now have the war behind us, and most of those who donned uniforms to serve their country have returned and resumed their work. However, there are a great many younger men who entered the service direct from their hospital internship who are more or less confused as to what course to pursue—to take further training or enter private practice. I feel that those of us who have established practices should do all in our power to assist these men in every way possible.

There are several things which will require our attention during the coming year. First among them is the Hill-Burton Bill, which has passed Congress. Undoubtedly there are certain areas in Virginia whose population receive inadequate medical care. I sincerely hope that the survey to be conducted by the State under this bill will be able to alleviate this condition by establishing in these areas rural hospital or health centers which will be staffed by capable men in all branches of medicine. The funds derived from the Federal Government under this bill should improve the condition of hospital bed shortage in the cities.

This is not a legislative year in Virginia, but, before the next meeting of the Society, candidates for the State Legislature will have been announced. It would be wise to obtain the views of these men on the question of regulation of certain cults practiced in this State. Such views should be obtained in writing prior to election and our votes and influence should be cast for those who favor protection of the people of the state from such practices. There is on the books a splendid law, passed three years ago, which gives these practitioners five years to take an examination on the Basic Sciences and make a percentage of only 50. It seems to me that any one who pretends to cure the ills to which human flesh is heir should, after five years' study, be able to pass such an examination. Our most efficient Legislative Committee, under the chairmanship of Dr. Caudill, prevented this law from being changed in the last legislative session, but we can rest assured that an even greater effort will be made at the next legislature to have this law annulled—backed by sufficient funds to influence certain people. The best time to persuade any candidate what is best for the people is before that candidate is elected. And his views in writing may have some influence in preventing him from changing his ideas on the subject.

It is gratifying that the House of Delegates has made it possible to continue the employment of an efficient director of the Committee on Public Relations and Medical Service. This is most important, in order to educate the profession and the general public as to each other's points of view. I feel that every member of the Society should become a voluntary member of this committee and give what information he has to his friends and patients. I will not erupt on the subject of socialized medicine, as I am sure you have heard sufficient on this subject during the meeting.

PRESIDENT POWELL: Is there any further business to come up?

DR. GUY FISHER, President-Elect: I should like to move, Mr. President, that a special vote of thanks be sent to the Norfolk and Princess Anne County Medical Societies for their fine arrangements for this meeting and for the splendid time we have had and that we also thank the hotel for the service that has been given us and for the very best arrangements they could secure for us.

This motion was seconded and was carried by a rising vote.

President Powell then read his list of standing committee appointments.

No further business appearing, the Medical Society of Virginia adjourned its 1946 convention *sine die* at eleven-forty-five o'clock a. m., Wednesday, October 16, 1946.

Standing Committees

(Numbers after names indicate length of term of office, as the By-Laws provide that new members of STANDING COMMITTEES shall be named by the in-coming President for terms of three years, except in the case of the Department of Clinical and Medical Education.)

PUBLICATION AND PROGRAM: M. P. Rucker, M.D. (2), Richmond, *Chairman;* Wyndham B. Blanton, M.D. (3), Richmond; A. P. Jones, M.D. (1), Roanoke.

SCIENTIFIC EXHIBITS AND CLINICS: W. Ambrose McGee, M.D. (1), Richmond, *Chairman;* Vincent W. Archer, M.D. (3), Charlottesville; H. F. Dormire, M.D. (2), Virginia Beach.

DEPARTMENT OF CLINICAL AND MEDICAL EDUCATION: Julian L. Rawls, M.D., Norfolk, *Chairman;* George B. Zehmer, Richmond, *Executive Secretary;* L. J. Roper, M.D., Richmond, *State Health Commissioner;* James P. Baker, M.D., Medical College of Virginia, Richmond; S. D. Blackford, M.D., University of Virginia, Charlottesville; H. S. Daniel, M.D., Louisa; R. Bryan Grinnan, Jr., M.D., Norfolk.

LEGISLATION: W. C. Caudill, M.D. (3), Pearisburg, *Chairman;* Dean B. Cole, M.D. (1), Richmond; Frank A. Farmer, M.D. (3), Roanoke; James R. Gorman, M.D. (3), Lynchburg; Frank S. Johns, M.D. (2), Richmond; W. A. Porter, M.D. (1), Hillsville; G. C. Tyler, M.D. (2), Newport News; C. C. Smith, M.D. (2), Norfolk; Alex. F. Robertson, Jr., M.D. (1), Staunton.

MEDICAL ECONOMICS: J. T. T. Hundley, M.D. (2), Lynchburg, *Chairman;* N. G. Wilson, M.D. (1), Norfolk; Guy R. Fisher, M.D. (1), Staunton; Walter B. Martin, M.D. (2), Norfolk; P. W. Boyd, M.D. (3), Winchester; George S. Hurt, M.D. (3), Roanoke.

MEMBERSHIP: B. E. Harrell, M.D. (3), Norfolk, *Chairman;* J. Bolling Jones, M.D. (2), Petersburg; J. F. Thaxton, M.D. (1), Tye River.

ETHICS: J. L. Hamner, M.D. (1), Mannboro, *Chairman;* K. D. Graves, M.D. (3), Roanoke; R. L. Raiford, M.D. (2), Franklin.

JUDICIAL: C. B. Bowyer, M.D. (3), Stonega, *Chairman*; P. St. L. Moncure, M.D. (2), Norfolk; J. Morrison Hutcheson, M.D. (1), Richmond.

Special Committees

PUBLIC RELATIONS AND MEDICAL SERVICE: J. M. Emmett, M.D., Clifton Forge, *Chairman;* H. B. Mulholland, M.D., Charlottesville; L. J. Roper, M.D., Richmond.

RURAL HEALTH: H. B. Mulholland, M.D., Charlottesville, *Chairman;* E. C. Jamison, M.D., Rocky Mount; W. R. Pretlow, M.D., Warrenton; L. J. Roper, M.D., Richmond.

CHILD WELFARE: Emily Gardner, M.D., Richmond, *Chairman;* J. M. Bishop, M.D., Roanoke; W. T. Graham, M.D., Richmond; R. B. Hightower, M.D., Alexandria; Mary E. Johnston, M.D., Tazewell; F. N. Mullen, M.D., Norfolk; W. W. Waddell, Jr., M.D., Charlottesville.

MATERNAL HEALTH: C. J. Andrews, M.D., Norfolk, *Chairman;* A. L. Carson, M.D., Richmond; G. N. Carter, M.D., Boydton; A. M. Groseclose, M.D., Roanoke; J. M. Nokes, M.D., Charlottesville; C. A. Nunnally, M.D., Fredericksburg; Waverly R. Payne, M.D., Newport News; F. O. Plunkett, M.D., Lynchburg; M. Pierce Rucker, M.D., Richmond; L.L. Shamburger, M.D., Richmond.

WALTER REED COMMISSION: Clarence Porter Jones, Sr., M.D., Newport News, *Chairman;* J. D. Clements, M.D., Ordinary; James W. Smith, M.D., Hayes Store.

TO CONFER WITH STATE BOARD OF NURSE EXAMINERS: I. A. Bigger, M.D., Richmond, *Chairman;* W. C. Akers, M.D., Stuart; Russell Buxton, M.D., Newport News; J. A. Gooch, M.D., Alexandria; A. P. Jones, M.D., Roanoke; C. Bruce Morton, M.D., Charlottesville; F. B. Teague, M.D., Martinsville.

VENEREAL DISEASE CONTROL: W. W. S. Butler, M.D., Roanoke, *Chairman;* David S. Garner, M.D., Roanoke; E. M. Holmes, Jr., M.D., Richmond; Raymond Kimbrough, M.D., Richmond; James W. Love, M.D., Alexandria; D. C. Smith, M.D., Charlottesville.

TUBERCULOSIS: C. Lydon Harrell, M.D., Norfolk, *Chairman;* Frank B. Stafford, M.D., Charlottesville; J. B. Nicholls, M.D., Catawba Sanatorium; Charles W. Scott, M.D., Burkeville.

MENTAL HYGIENE: Frank H. Redwood, M.D., Norfolk, *Chairman;* J. E. Barrett, M.D., Richmond; R. Finley Gayle, M.D., Richmond; James P. King, M.D., Radford; David C. Wilson, M.D., Charlottesville.

CANCER: George Cooper, Jr., M.D., Charlottesville, *Chairman;* William H. Parker, M.D., Charlottesville; I. A. Bigger, M.D., Richmond; Clayton W. Eley, M.D., Norfolk; A. B. Gathright, M.D., Richmond; George Zur Williams, M.D., Richmond; E. P. Lehman, M.D., Charlottesville; R. L. Payne, M.D., Norfolk; L. J. Roper, M.D., Richmond; Hugh H. Trout, M.D., Roanoke.

INDUSTRIAL HEALTH: H. U. Stephenson, M.D., Richmond, *Chairman;* W. B. Barton, M.D., Stonega; M. W. Healy, M.D., Norfolk; J. V. Jordan, M.D., Covington; Alexander McCausland, M.D., Blacksburg.

NUTRITION: I. C. Riggin, M.D., Richmond, *Chairman;* McLemore Birdsong, M.D., Charlottesville; George H. Carr, Jr., M.D., Portsmouth; Edwin A. Harper, M.D., Lynchburg; A. B. Hodges, M.D., Norfolk.

ADVISORY TO WOMAN'S AUXILIARY: Leta J. White, M.D., Petersburg, *Chairman;* H. A. Latane, M.D., Alexandria; P. W. Miles, M.D., Danville; H. W. Rogers, M.D., Norfolk; Reuben F. Simms, M.D., Richmond.

REHABILITATION: Roy M. Hoover, M.D., Roanoke, *Chairman;* Paul D. Camp, M.D., Richmond; George A. Duncan, M.D., Norfolk; Hugh Page Newbill, M.D., Charlottesville; N. F. Rodman, M.D., Norfolk; L. J. Roper, M.D., Richmond; G. B. Setzler, M.D., Pennington Gap; Leroy Smith, M.D., Richmond; Frank B. Stafford, M.D., Charlottesville.

BUSINESS SESSIONS

Council

The annual meeting of the Council of the Medical Society of Virginia was held at The Cavalier, Virginia Beach, October 14th at 9:30 A. M., with the President, Dr. Julian L. Rawls, presiding. Others in attendance were: Dr. W. L. Powell, President-Elect; Dr. H. B. Mulholland, immediate past President; Dr. J. D. Hagood, Vice-President; Drs. R. B. Bowles, C. L. Harrell, Carrington Williams, J. L. Hamner, W. A. Porter, J. R. Gorman, and J. E. Knight, Councilors; Dr. L. J. Roper, State Health Commissioner; and Dr. M. P. Rucker, Editor of the MONTHLY.

The minutes of the Council, as published in the March and July 1946 issues of the VIRGINIA MEDICAL MONTHLY, were approved.

A report of the Veterans Loan Fund being called for, Dr. Williams stated they had had no calls for a loan and as the war is over and there seems to be no need of this fund, he moved that the committee be dismissed. Dr. Gorman stated he had heard a number of favorable comments on this gesture and felt that from the standpoint of policy it would be a good idea to continue the committee though he did not believe they would be called upon for loans. Dr. Williams withdrew his motion and the committee stands.

The budget as prepared by Drs. Williams and Gorman was then presented with the following recommendations:

1. That the annual dues of $2.00 allocated to the Legislative Committee be abolished;

2. That the budget of the Public Relations office of approximately $30,000 a year requires an increase in dues from the members of the Society to take care of the regular expenses and the anticipated expenses of this office; and that the dues be increased to $25.00 a year for all members who have been licensed to practice for five or more years; $15.00 a year for those members licensed less than five years; and $7.00 for associate members.

The budgets for the regular activities of the Society and for the office of Public Relations are as follows:

Regular Activities

Budget—October 1, 1946—September 30, 1947

	Proposed
Salaries	$ 6,400.00
Bonus	600.00
Rent	600.00
Phone	150.00
Postage	275.00
Stationery and Supplies	110.00
Repairs and Replacement	150.00
Miscellaneous	75.00
Audit	90.00
Social Security	60.00
Preparation of Journal	10,000.00
President's account	100.00
President-Elect's account	50.00
Councilor's and Secretary's expense	100.00
Delegates to A.M.A.	250.00
Scientific Exhibits	350.00
Clinical and Medical Education	1,200.00
Walter Reed Commission	125.00
Maternal Health	20.00
Child Welfare	10.00
Cancer Control	145.00
Industrial Health	20.00
Public Relations and Medical Service	300.00
Convention	600.00
	$21,780.00

Office of Public Relations

Budget—October 1, 1946—September 30, 1947

Rent	$ 600.00
Office equipment	1,000.00
Secretarial compensation	2,000.00
Printing—literature—bulletins	3,000.00
Communications—postage—telephone—telegraph—editing—miscellaneous	3,500.00
Radio—composition—time	3,500.00
Press—advice—space	6,000.00
State conferences—representative from each component society	1,000.00
Director: Salary—$7,000.00—Travel expense—$2,000.00	9,000.00
	$29,600.00

The Council moved the approval of the budget and the recommendations, these to be presented to the House of Delegates for final action. Dr. Porter felt it was going to be necessary for someone to sell this idea to the House of Delegates and they in turn would be prepared to explain it to the other members of the Society.

The Budget Committee also recommended that Miss Watkins be made assistant secretary with an appropriate salary increase.

A statement of the financial assets of the Society was given as follows:

Assets in Hand

GENERAL FUND		
Checking Account	$11,842.13	
Savings Accounts	4,962.93	
		16,805.06
Investments at current redemption value		21,221.50
		38,026.56
LEGISLATIVE COMMITTEE—Special Fund		
Cash in Bank	$ 4,598.38	
Invested in bonds	9,990.00	
		14,588.38
Total assets September 30, 1946		$52,614.94

Dr. Powell felt that the Committee on Scientific Exhibits should have a larger appropriation in order to buy equipment for better displays as they now have no material to work with. They are definitely in need of view boxes for x-ray films. Dr. Mulholland said he definitely felt the committee needed materials to work with and he thought $1,000 would cover it. Dr. Williams moved that the committee investigate this matter and report to the Council at its next meeting at which time an additional appropriation could be made. This was seconded and carried.

It was moved that dues be pro-rated on a monthly basis if a member comes in before the annual meeting, and, after that time, they shall be applied to the following year.

Dr. Rawls then introduced Dr. L. J. Roper, new State Health Commissioner, and assured him of the wish of the Society to cooperate with him at all times.

The following proposal of a diagnostic service for patients in limited income groups, as prepared by Dr. Raymond Kimbrough, was next discussed:

Proposal for a Diagnostic Service for Patients in Limited Middle Income Groups

TO THE COUNCIL OF THE MEDICAL SOCIETY OF VIRGINIA:

Since present day diagnosis requires considerable laboratory, x-ray and precision instrument equipment as well as technicians and specialists, it is proposed that the two medical schools be requested to make an effort to provide a diagnostic service for the physicians of the state. This service would cover diagnostic studies and specialist consultations but no treatment. Patients would not be given reports, only the family physician or referring physician would get the findings and recommendations.

For patients in limited income groups there would be established a scale of low predetermined flat fees, or

fee-for-service with a specified maximum. The decisions as to all charges, eligibility rules for patients based on their incomes, other policies and administration are to be the responsibility of a committee or board appointed by the president of the Medical Society of Virginia and consisting of five members of which three are medical school faculty members.

The practical value of this type of diagnostic service has been proved by 18 years of successful operation at Johns Hopkins Hospital as well as for variable times at Mount Sinai Hospital, New York, the Mayo Clinic, the Joseph H. Pratt Diagnostic Hospital, Boston, and others.

The function of this type of diagnostic clinic usually requires a full time director. Arrangements for space, supplies and nursing are made with the clinic or hospital at minimum cost. The laboratories and x-ray departments are asked to give minimum rates. The work is done by visiting staff, faculty members, and not residents and internes. These staff physicians are paid from the collections on a session hour basis with the amount determined for each session hour depending on the amount left after the overhead expenses are paid each month. No profit will accrue to the clinic, hospital or medical school, and all policies of operation are subject to the decisions of the Diagnostic Service Committee appointed by the Medical Society of Virginia.

An effort may be made to get financial aid from one of the foundations during the first year or two of getting established. This has been done in other instances and if obtained would make the program more certain of success.

Similar to the Virginia Medical Service Association, this service would be operated and controlled by doctors for doctors and similarly it would improve the quality of medical care for the limited income groups and thereby do much to prevent the extension of legislation to include medical expenses under the Social Security program.

The following motion is made: The Medical Society of Virginia requests the Department of Medicine of the University of Virginia and the Medical College of Virginia to endeavor to provide this diagnostic service at their respective medical schools and with the co-operation of the Diagnostic Service Committee which will be appointed and will have the responsibilities as described above.

Dr. Harrell felt that this should be given further study and Dr. Mulholland stated that it was a matter which needed a good deal of careful study and he did not think the University would be willing to consider it without thorough investigation. Dr. Harrell then moved that it be passed over for further study. This was seconded. Dr. Williams moved that the plan be disapproved. Dr. Harrell amended his motion to read that the Council disapproves of a plan to establish diagnostic study clinics at the University of Virginia and the Medical College of Virginia. This was seconded and carried.

The following letter from Dr. Frank H. Lahey, Chairman, Directing Board of the Procurement and Assignment Service, was next read:

For practical purposes the functions of the Procurement and Assignment Service have been terminated and the activities of the several State offices brought to a close. The success of the program in meeting the needs of the armed forces without sacrificing the civilian population may be attributed directly to the patient and timeless devotion of many State Committees and countless local advisers. Many of these Committeemen and advisers are unknown to the Directing Board, except through the results of their efforts, and it would obviously not be practicable to undertake to communicate with them.

In a recent letter to each State Chairman, I asked that the appreciation of the Directing Board be conveyed to all the State and local representatives whose full co-operation was essential to the ultimate achievement. The Directing Board, at its final meeting on May 17, 1946, resolved that the untiring efforts, kind tolerance, and successful accomplishment of these State Committee members and local advisers be commended to the appropriate professional State Society for suitable recognition by the Society.

I hope you will draw this recommendation to the attention of your Society, and that they will be disposed to afford some such recognition.

Sincerely yours,
FRANK H. LAHEY, M.D.,
Chairman, Directing Board.

Dr. Mulholland moved that this be published in the MONTHLY. Carried.

The question of refugee physicians changing their locations after having been placed by the State Board of Medical Examiners was discussed, and it was stated that every man who had been placed in a certain area had signed an agreement whereby he would confine his practice to that special location for a specified time.

The following resolution from the Virginia Society for Pathology and Laboratory Medicine was presented:

Resolution Adopted by the Virginia Society for Pathology and Laboratory Medicine April 26, 1946

The Virginia Society for Pathology and Laboratory Medicine, being a duly constituted section of the Medical Society of Virginia and the state unit of the American Society of Clinical Pathologists, has unanimously adopted the following resolution.

WHEREAS, the practice of Pathology is a specialty branch of medical practice;

WHEREAS, the practice of Pathology is governed by the same principles of medical ethics that govern other branches of medical practice;

WHEREAS, the American Medical Association, the American Society of Clinical Pathologists and the American Hospital Association are in agreement on these general principles; and

WHEREAS, on the basis of a circular letter recently distributed to physicians practicing in the Medical College of Virginia Hospital, it is apparent that the Medical College of Virginia Hospital is violating these stated principles, to the extent that (1) the Hospital has offered to do laboratory work on private out-patients and receive a fee therefor; and (2) the Hospital offers "concessions" or "rebates" to physicians referring such laboratory work;

THEREFORE BE IT RESOLVED THAT:

The Virginia Society for Pathology and Laboratory Medicine go on record as opposing the action taken, and that notice to that effect be sent to the President and the Dean of the Medical College of Virginia, the Director of the Medical College of Virginia Hospital, the Secretary of the Medical Society of Virginia, the Secretary of the American Society of Clinical Pathologists, the Secretary of the Council on Medical Education and Hospitals of the American Medical Association, the Secretary of the American Hospital Association, and the Secretary of the Richmond Academy of Medicine.

W. E. BRAY, M.D., *President*
THOMAS M. PEERY, M.D., *Secretary*
Virginia Society for Pathology and Laboratory Medicine.

After discussion, it was moved and carried that this, along with a letter from the American Society of Clinical

Pathologists, be referred to the Committee on Ethics with the request that they report their findings at the next meeting of the Council.

The following resolution from the Bureau of Health Education, as passed by the House of Delegates of the American Medical Association, was presented:

WHEREAS, A major inadequacy in the civilian health protection in war as in peace time continues from the failure of many states and of not less than half the counties in the states to provide even minimum necessary sanitary and other preventive services for health, by full-time professionally trained medical and auxiliary personnel on a merit system basis supported by adequate tax funds from local and state and where necessary from federal sources; therefore be it

RESOLVED, That the Trustees of the American Medical Association be urged to use all appropriate resources and influences of the Association to the end that, at the earliest possible date, complete coverage of the nation's area and population by local, county, district or regional full-time modern health services be achieved.

(Proceedings of the House of Delegates of the American Medical Association, the ninety-third annual session, held at Atlantic City, N. J., June 8-12, 1942, p. 71.)

It was stated that fifty-one counties of Virginia already have health units and fifteen counties and two cities have made application for this service. This takes care of seventy per cent of the rural population of the State, and the work will be extended as facilities permit. The Bureau should be advised that this is being taken care of in Virginia.

Being asked for a report on the Veterans Fee Scale, Dr. Emmett, chairman of the Public Relations and Medical Service Committee, stated that the schedule had been prepared and submitted to the Veterans Administration but they had not approved it in full. He did not feel this should be presented to the Society until it had full approval, and Dr. Harrell moved that this Committee be given full authority to negotiate with the Veterans Administration with regard to the fee schedule. Seconded and carried.

A letter from the Metropolitan Life Insurance Company was read as follows:

During the latter part of this year and the spring of 1947, this Company will conduct an intensive nationwide educational program of heart disease. To make this effort a success, the cooperation and support of the medical profession will be indispensable.

Much has been done by this Company in compiling statistics and assembling varied educational facilities to sponsor interest in this most important field. Attention and concentration of effort will be placed on further instruction of the public regarding prevention, early recognition and care of cardiac lesions. The aim of the program will be to stress early diagnosis and immediate initiation of adequate cardiac regimes. Encouragement from your state society to your member societies is much desired to further these efforts.

Accompanying this letter is a statement to medical journals of the program to be followed, and copies of material prepared. We shall be glad to send additional literature and to give further information concerning any phase of the proposed campaign.

Very truly yours,
D. B. ARMSTRONG, M.D.,
Second Vice-President
Health and Welfare Division.

The secretary was instructed to acknowledge this with the statement that the Society will cooperate in this program.

It was moved and carried that the Society send resolutions of sympathy to Dr. Alex. F. Robertson on the death of his wife, and telegrams of good wishes to Drs. Roshier Miller, Stuart McGuire, and F. H. Smith, who were sick at this time. All of these doctors are past-presidents of the Society.

There being no further business the Council adjourned.

House of Delegates
Monday October 14

The first meeting of the House of Delegates was called to order by the President, Dr. Rawls, at 11:00 A. M., on October 14th.

There being a quorum present, the minutes of the last meeting as published in the December 1945 issue of the MONTHLY were approved.

The report of the Budget Committee, as approved by the Council, was then presented.

Some of the members felt the assessment for the Legislative Fund should be continued as the Society is going to need this for future legislative work. The fight against cults is not over and it is going to take money. Dr. Rodman moved that the report be amended to set aside $1.00 from each member's dues for the legislative fund. This was seconded. Dr. Mulholland stated that the fund now amounts to almost $15,000.00 and as the Society has a surplus on hand, he felt that additional funds could be appropriated immediately in case of emergency. Dr. Gorman stated that in raising the dues the Society income would be definitely increased and a part of the Public Relations budget would be spent along this line. This is one of the reasons for this Department. Dr. Emmett, chairman of the Public Relations Committee, said he hoped the committee would be able to accomplish some material things before the legislature meets. He stated the Society should not be unmindful of the work of the Legislative Committee but felt there is a sufficient fund in the special account to assure the members that there will be no necessity of more money before a Council meeting could be called to allocate emergency funds for this work. Dr. Williams stated that if further money is segregated without further increase of dues, this amount will have to be taken away from the budget as already prepared. Dr. Rodman then changed his motion so that an additional $1.00 be added to the already proposed increase in dues, this to be segregated for legislative work. Being put to vote, the motion was lost. The report of the budget committee was then accepted.

Reports of Committees, as published in the October MONTHLY, were then presented.

Executive Secretary-Treasurer (page 463). The secretary stated that since publication of this report she had been advised that Scott County Medical Society had been re-organized. The report was accepted.

Delegates to the American Medical Association (pages 463-4). Dr. Hutcheson called attention to the

fact that North Carolina has three delegates and Virginia only two. He thought it would be wise for the House of Delegates of the State Society to make a greater effort to enroll more members in order that the Society might have a larger representation in the A. M. A. The report was accepted.

Publication and Program (page 464). Accepted.

Scientific Exhibits and Clinics (page 464). Accepted.

Department of Clinical and Medical Education (page 465). Accepted.

Legislation (pages 465-7). Accepted.

Medical Economics (page 467). Accepted.

Membership (pages 467-8). Dr. Showalter, chairman, moved the acceptance of the report with the recommendation of Honorary Membership for Dr. Rawls. There was a rising vote of acceptance.

Ethics (page 468). Accepted.

Judicial (page 468). As revisions to the By-Laws have to lay on the table overnight, this report and the following change with regard to dues were referred to the meeting on the following day:

ARTICLE II—DUES

Section 1—There shall be an annual assessment for each calendar year of $25.00 upon each active member who has been licensed to practice for more than five years, payable in one or more installments before December 31 of that year. Those who have been licensed to practice for less than five years shall be assessed $15.00 for each calendar year. Dues for associate members shall be $7.00 for each calendar year. Dues shall be pro-rated on a monthly basis for those joining during the year.

Public Relations and Medical Service (pages 468-9). Accepted.

Rural Health (page 469). Accepted.

Maternal Health (pages 469-70). Accepted.

Child Welfare (pages 470-1). Accepted.

Walter Reed Commission (page 471). Accepted.

To Confer with State Board of Nurse Examiners (page 471). Accepted.

Syphilis Control (pages 471-2). Dr. Butler, chairman, presented the following amendments to his report which was accepted:

In second column on page 471 add: 8. Cooperation with the Board of Education with the view of distributing literature in the 7th grade and high schools.

On page 472, under "3. Laboratory Facilities", add first sentence as follows: The State Health Department has conducted a serologic evaluation study in the fall of 1946 for all public and private laboratories desiring to be approved for the preparance of serologic tests in connection with the Virginia premarital examination act.

Tuberculosis (pages 472-4). Accepted.

Mental Hygiene (page 475). Accepted.

Medical Examiner System (pages 475-6). It was stated that this committee has done an excellent work and the Society is being congratulated upon the system that has been set up. As they have completed their work and the committee is to be discharged, a rising vote of thanks was given them. Dr. L. J. Roper, a member of the Commission to put this system in working order, said that at this time about seventy medical examiners had been appointed and the chief medical examiner has also been named and will be available for duty about the first of the coming year.

Industrial Health (page 476). Accepted.

Cancer (page 476). The following supplementary report was presented by Dr. Cooper, chairman:

It has been the practice of the Cancer Committee to receive and act upon applications for certification of new Tumor Clinics at any time during the year. In the future, the Committee will act upon such applications only during the meetings of the Medical Society of Virginia.

Also, as a prerequisite to Cancer Committee certification, the Committee will require approval of clinics by the American College of Surgeons. All clinics that have already been certificated by the Cancer Committee will be required to obtain American College of Surgeons approval before the next meeting of the Medical Society of Virginia.

The report and supplement were accepted.

Nutrition (page 477). Accepted.

Rehabilitation (page 477). Accepted.

Advisory to Woman's Auxiliary (page 477). Accepted.

The annual report from the President of the Auxiliary was then presented as follows:

TO THE HOUSE OF DELEGATES OF THE MEDICAL SOCIETY OF VIRGINIA:

The Woman's Auxiliary to the Medical Society of Virginia has had an increase in membership during 1945-1946 through the existing groups and by the re-organization of the Auxiliary to the Danville-Pittsylvania Academy of Medicine and the organization of two new groups namely the Auxiliary to the Northern Neck Medical Society and the Auxiliary to the Arlington County Medical Society.

Two of our nine component auxiliaries have been inactive during the war years but it is hoped that their activity will be resumed. There were seven active auxiliary in the state with a paid-up membership of two hundred and eighty-one members as of May 1, 1946; we now have ten active groups with 397 members and approximately thirty new members for the coming year.

The program for the year was Juvenile Delinquency and Physical Fitness.

In cooperation with the Medical Society and other organizations many excellent programs were presented by outside speakers.

Through these public relations meetings health education and legislation were presented by well qualified speakers to other women's organizations interested in promoting better health.

The Chairman of Legislation, with the approval of the Medical Society, has been able to get much assistance from other groups in helping to have passed good laws with medical significance. Her quick response to a request, with that of other officers, helped to prevent the

endorsement of the Wagner-Murray-Dingell Bill by a large National group of women.

Instead, information was given on constructive medical service plans offered by members of the medical profession as an alternative to "Federalized" medicine.

The value of *Hygeia* is a foregone conclusion but much remains to be done to have it reach the greatest proportion of the general public. Subscriptions for seventy copies have been made through the Woman's Auxiliary in Virginia this year.

Through the intensive program of our Bulletin Chairman 56 subscriptions to our National publication were secured. Much can be gained through the study of the Bulletin.

Cancer control has been stressed and auxiliary members have served on the Board of the Virginia Cancer Foundation and done volunteer work in the Cancer Prevention Clinic.

The Jane Todd Crawford Memorial is now to be used as a scholarship fund for medical students through the Auxiliary to the Southern Medical Association. Added interest and support are asked for this project.

There has arisen a definite need for the Leigh-Hodges-Wright memorial fund and we are glad to be able to meet the immediate need while at the same time we hope to build a permanent endowment.

Every member of the auxiliary has been actively engaged in one or more phases of war work. The record of the various activities is an inspiration to spur us on to greater peace-time participation in constructive planning and work.

The philanthropic work ranges from the donation of large sums to hospitals, linen showers, purchasing of baby conveyors, scholarship funds, library funds, Christmas parties and gifts for soldiers and children, chaperoning parties, serving in clinics, buying War Bonds, to salvaging commodities.

The activities of the Auxiliaries have appeared in the local papers and on the Woman's Auxiliary page of the VIRGINIA MEDICAL MONTHLY.

Our historian has done excellent work in saving all records but asks our cooperation in preserving more data.

The social aspect of the auxiliary has not been neglected. Many things have been done to create fellowship among the physicians' families.

Our National President has asked us to stress the importance of this objective; namely, the cultivation of friendly relations and promotion of mutual understanding among physicians' families. "The success of our entire program is dependent upon the fulfillment of this objective. If we have friendship and unity among our members, the scope of our accomplishments is unlimited."

Progress in the right direction is largely dependent on the counsel and active help of the advisory committee. Members of the Advisory Committee are invited to attend meetings of the State Auxiliary at annual sessions. Auxiliary members are anxious to render valuable service to the Medical Profession and in turn to the public.

We ask for the continued support and guidance of the Medical Profession and particularly that of the Advisory Committee, which has been most gracious and cooperative in every request.

The excellent report of Dr. Philip Smith on the recommendations of the sub-Committee of the Virginia Advisory Legislative Council on its Study of Rural Medicine and the address of Dr. Irl C. Riggin on Rural Health and Medical Care Plans were most helpful.

The finances of the Auxiliary have been kept in good condition by our Chairman of Finance and faithful Treasurer.

The Auxiliary to the American Medical Association offered a revised constitution and by-laws as a model for State Auxiliaries. The Committee on Revisions will present a revision at the annual meeting.

The Councilor to the Southern Medical Association was requested to write a brief history of the Auxiliary to the Medical Society of Virginia.

Our President-Elect has been most active. She accompanied the President to the National Conference of officers and State Presidents in Chicago in December. We both feel that we gained much from the conference.

To her and to our loyal officers and members I should like to express my deepest appreciation for their excellent cooperation.

To our new members we give a hearty welcome and look forward to years of pleasure and service together.

We are happy to be the Auxiliary to so noble a group as the Medical Society of Virginia. The faithful ministry and self-denial of the Medical Profession have played a great part in the onward march of God's truth.

Respectfully submitted,
MARIE C. CHICHESTER (MRS. P. M.),
President, Woman's Auxiliary to the Medical Society of Virginia.

A recess was taken at this time for the election of a Nominating Committee and the following were named:

1st district—Dr. A. A. Creecy.
2nd district—Dr. W. B. Martin.
3rd district—Dr. I. A. Bigger.
4th district—Dr. J. L. Hamner.
5th district—Dr. B. A. Hopkins.
6th district—Dr. C. H. Peterson.
7th district—Dr. Guy Fisher.
8th district—Dr. J. W. Love.
9th district—Dr. J. C. Moore.

Dr. Guy Fisher moved that a telegram of sympathy be sent Dr. Alex. Robertson, and also that telegrams be sent Drs. Roshier Miller, F. H. Smith, and Stuart McGuire, who were sick. Carried.

Dr. Rawls then introduced Dr. Joseph Lawrence, Director of the Washington office of the Council on Medical Service of the American Medical Association, and announced that he would be the guest speaker at the opening session of the Society that night.

Mr. Henry Johnson, director of Public Relations and Medical Service of the Society, was also introduced. He told of some of the problems of his Department and of the preliminary work he had been doing. He stated that at an early date, there would be a meeting of representatives from each component society to discuss the work and program of the Department. The work of public relations in Virginia is going to be just about as effective as the local medical societies are willing and want it to be and it is going to take much cooperation to be able to accomplish what is desired.

The House then adjourned to meet again the following morning at 9:00 A. M.

Tuesday, October 15th

The second meeting of the House of Delegates was held at 9:00 A. M., October 15th, with the President, Dr. Rawls, presiding.

The report of the Judicial Committee, as brought over from the first meeting, was then presented and accepted.

The question of a joint meeting with West Virginia was discussed and it was moved and carried that this

be deferred for the present until a suitable location and time could be found for such a meeting.

The report of the Nominating Committee was presented as follows:

President-Elect—Dr. Guy Fisher, Staunton.

Vice-Presidents—Dr. A. B. Hodges, Norfolk.
Dr. Carrington Williams, Richmond.
Dr. W. C. Akers, Stuart.

Executive Secretary-Treasurer—Miss Agnes V. Edwards, Richmond.

Councilors:

2nd district—Dr. C. L. Harrell, Norfolk.
4th district—Dr. J. L. Hamner, Mannboro.
6th district—Dr. W. R. Whitman, Roanoke.
8th district—Dr. J. E. Knight, Warrenton.

The Councilors from the even numbered districts hold over for another year.

Drs. J. M. Hutcheson and Carrington Williams were re-elected as delegate and alternate, respectively, to the American Medical Association for a term of two years. Drs. H. B. Mulholland and W. B. Martin hold over for another year.

Recommendations to be presented the Governor from the 7th, 8th and 9th districts to fill vacancies in the State Board of Medical Examiners were as follows:

7th district—
Dr. Alex. F. Robertson, Jr., Staunton.
Dr. C. L. Riley, Winchester.
Dr. J. M. Emmett, Clifton Forge.

8th district—
Dr. Chalmers Gemmill, Charlottesville.
Dr. W. R. Pretlow, Warrenton.
Dr. Thomas M. Peery, Alexandria.

9th district—
Dr. James P. Williams, Richlands.
Dr. G. B. Setzler, Pennington Gap.
Dr. C. B. Bowyer, Stonega.

It was moved that the Councilors contact these men to determine whether or not they would serve if appointed. If any of them cannot serve, the Councilor will be responsible for assembling the delegates from that district to select another member. Seconded and carried.

An invitation was extended from the Roanoke Academy of Medicine to hold the 1947 meeting in that City. This was unanimously accepted. It was then moved that the Council be prepared to canvas the situation and see where it will be best to meet in 1948. Seconded and carried.

Dr. Carrington Williams said that Dr. Gorman had told him of a meeting the Lynchburg Academy of Medicine is planning at which they will have their representative in Legislature who voted for the chiropractic bill. It was thought a good idea for all societies to invite their representatives and prospective representatives to a meeting and discuss medical affairs.

Dr. Rawls introduced Dr. George F. Lull, Secretary and General Manager of the American Medical Association, who was a guest of the Society. Dr. Lull spoke briefly on some legislative trends.

Dr. Martin stated that some years ago he had introduced a resolution establishing district councils and felt that these councils should be more active. He moved that the Councilors be so notified and that the councils be revived. Seconded and carried.

An expression of appreciation to The Cavalier was extended and it was stated that it was felt they had done everything in their power to make the meeting pleasant.

A vote of thanks was also given the Norfolk and Princess Anne County Medical Societies for their work in making the meeting a success.

There being no further business, the House adjourned.

AGNES V. EDWARDS,
Secretary.

Approved:
JULIAN L. RAWLS,
President.
October 16, 1946.

Auditor's Report

October 1, 1945—September 30, 1946

THE OFFICERS AND COUNCILORS,
MEDICAL SOCIETY OF VIRGINIA,
RICHMOND, VIRGINIA.

GENTLEMEN:

We have made an examination of the books of the Medical Society of Virginia for the fiscal year ended September 30, 1946, and submit herewith our report consisting of the following financial statements and related comments.

EXHIBITS

"A" Balance Sheet.
"B" Statement of Income and Expense.
"C" Receipts and Disbursements of Legislative Committee Special Fund.

Comments

The financial condition of the Society at September 30, 1946, is stated in the balance sheet, Exhibit "A", a summary of which is given below in comparison with that at September 30, 1945:

ASSETS:	9-30-46	9-30-45
Cash	$21,403.44	$32,370.67
Accounts Receivable	1,365.86	1,127.26
Investments—U. S. Bonds	31,211.50	16,620.50
TOTALS	$53,980.80	$50,118.43
LIABILITIES AND SURPLUS:		
Liabilities:		
Accounts Payable	$ 1,063.16	$ 976.78
Surplus:		
General Fund	38,329.26	36,940.70
Special Legislative Fund	14,588.38	12,200.95
TOTALS	$53,980.80	$50,118.43

The income and expenses of the General Fund for the fiscal year ended September 30, 1946, are shown in Exhibit "B", prepared on the cash receipts and disbursements basis. The operations for the current and the

preceding year are shown in condensed form as follows:

	9-30-46	9-30-45
INCOME:		
Medical Society	$ 7,394.81	$ 5,538.53
Medical Monthly Publication	19,472.03	17,173.18
TOTALS	$26,866.84	$22,711.71
EXPENSES:		
Medical Society	$11,895.78	$ 5,281.52
Medical Monthly Publication	13,534.02	11,538.38
TOTALS	$25,429.80	$16,819.90
SURPLUS INCOME FOR THE YEAR	$ 1,437.04	$ 5,891.81

The receipts and disbursements of the Legislative Committee Special Fund are stated separately in Exhibit "C". As of September 30, 1946, this fund had cash in bank amounting to $4,598.38 together with an investment of $9,990.00 in United States savings bonds.

The membership dues are $7.00 annually and the collections therefrom are allocated to:

General Fund	$ 3.00
Subscriptions to the Medical Journal	2.00
Legislative Committee Special Fund	2.00

The cash balances of the Society at September 30, 1946, were confirmed by certificates from the following depositories:

GENERAL FUND:	
First & Merchants National Bank—Checking Account	$11,842.13
First & Merchants National Bank—Savings Account	2,366.29
The Bank of Virginia—Savings Account	1,666.57
Southern Bank & Trust Company—Savings Account	930.07
TOTAL	$16,805.06
LEGISLATIVE COMMITTEE SPECIAL FUND:	
First & Merchants National Bank—Savings Account	$ 4,598.38

INVESTMENTS: The current redemption value of the United States Savings Bonds held for account of the General Fund was $21,221.50, and those for account of the Legislative Committee Special Fund, $9,990.00. These bonds were verified by inspection.

Accounts Receivable for membership dues and for advertising in the Medical Monthly Publication are stated at collectible value as estimated by the Secretary-Treasurer.

Insurance in force, determined from policies on hand, was as follows:

Office Furniture and Fixtures	$1,000.00
Walter Reed House, Belroi, Virginia	1,000.00
Fidelity Bond, Secretary-Treasurer	2,500.00

All recorded cash receipts were found to have been properly deposited in bank, and disbursements were evidenced by paid bank checks properly signed and endorsed.

Respectfully submitted,

SHEPHERD, JACKSON & WIGGINS,
Certified Public Accountants.

Balance Sheet—September 30, 1946

Exhibit "A"

ASSETS

CASH:		
General Fund	$16,805.06	
Special Fund—Legislative Committee	4,598.38	$21,403.44
DUE FROM MEMBERS (Estimated Collectible Value):		
1946 Dues—30 @ $7.00		210.00
ACCOUNTS RECEIVABLE:		
Virginia Medical Monthly for Advertising		1,155.86
INVESTMENTS:		
United States Savings Bonds:		
General Fund	21,221.50	
Special Fund—Legislative Committee	9,990.00	31,211.50
TOTAL ASSETS		$53,980.80

LIABILITIES AND SURPLUS

LIABILITIES:		
Accounts Payable:		
Preparation of Medical Journal, September, 1946, Issue	$ 1,023.16	
Social Security Tax	40.00	$ 1,063.16
SURPLUS:		
General Fund	$38,329.26	
Special Fund—Legislative Committee	14,588.38	52,917.64
TOTAL LIABILITIES AND SURPLUS		$53,980.80

Statement of Income and Expense For Fiscal Year Ended September 30, 1946

Exhibit "B"

MEDICAL SOCIETY OF VIRGINIA DIVISION

		ACTUAL	BUDGET
INCOME:			
Membership Dues @ $3.00 each		$ 5,273.90	
Royalties on History of Medicine		159.10	
Commercial Exhibits—Net Receipts		1,876.02	
Interest on Investments (½)		85.79	
TOTAL		$ 7,394.81	
EXPENSES:			
Salaries (Apportioned):			
Secretary-Treasurer	$2,000.00		
Clerical Assistant	1,000.00	$ 3,000.00	$ 3,000.00
Bonuses for Year Ended 9-30-45 (½)		300.00	300.00
Director of Public Relations:			
Salary (3-15-46 to 9-30-46)	3,791.67		
Traveling Expense	1,262.93		
Other Expense	578.90	5,633.50	12,000.00

Special Appropriations by Council:		
Service to World War Veterans	500.00	500.00
Virginia Health Council	250.00	250.00
Office Rent and Telephone	378.11	375.00
Stationery and Office Supplies	74.89	75.00
Repairs to Equipment	8.00	40.00
Postage	142.79	225.00
Audit Fee (½)	37.50	37.50
Social Security Tax (½)	19.75	30.00
Miscellaneous Expense	80.08	25.00
State Convention Expense	159.19	600.00
Delegates to A.M.A. Convention	629.41	650.00
Councilors' and Officers' Expenses	103.97	75.00
President's Expense	59.68	100.00
President-Elect's Expense	50.00	50.00
Walter Reed Commission	21.00	125.00
Committee Expenses:		
Clinical & Medical Education	80.00	2,400.00
Maternal Health	12.00	20.00
Cancer Control	119.69	120.00
Public Relations & Medical Service	236.22	300.00
Scientific Exhibits	-----	350.00
Child Welfare	-----	10.00
Industrial Health	-----	20.00
TOTALS	$11,895.78	$21,677.50

EXCESS OF EXPENSES OVER INCOME ($ 4,500.97)

VIRGINIA MEDICAL MONTHLY DIVISION

INCOME:		ACTUAL	BUDGET
Advertising		$15,491.86	
Subscriptions:			
Membership Dues @ $2.00 each		3,515.93	
Non-Members		378.45	
Interest on Investments (½)		85.79	
TOTAL		$19,472.03	
EXPENSES:			
Salaries (Apportioned):			
Secretary-Treasurer	$2,000.00		
Clerical Assistant	1,000.00	$ 3,000.00	$ 3,000.00
Bonuses for Year Ended 9-30-45 (½)		300.00	300.00
Preparation of Journal—including Distribution Cost		9,639.94	9,360.00
Rent and Telephone		364.78	375.00
Stationery and Office Supplies		39.04	35.00
Office Postage		24.85	55.00
Repairs to Equipment		8.00	40.00
Audit Fee (½)		37.50	37.50
Social Security Tax (½)		19.75	30.00
Traveling Expenses		81.42	81.42
Miscellaneous Expense		18.74	20.00
TOTALS		$13,534.02	$13,333.92
SURPLUS INCOME FOR YEAR		$ 5,938.01	

SUMMARY OF OPERATIONS

DIVISION	ACTUAL INCOME	ACTUAL EXPENSES	SURPLUS (DEFICIT)
Medical Society	$ 7,394.81	$11,895.78	$(4,500.97)
Medical Journal	19,472.03	13,534.02	5,938.01
TOTALS	$26,866.84	$25,429.80	$ 1,437.04

Legislative Committee Special Fund—Receipts and Disbursements
For Fiscal Year Ended September 30, 1946

Exhibit "C"

BALANCE—OCTOBER 1, 1945			$12,200.95
RECEIPTS:			
Membership Dues @ $2.00 each		$3,505.00	
Interest on Savings Account		64.54	3,569.54
TOTAL AVAILABLE			$15,770.49
DISBURSEMENTS:			
Expenses:			
Legal Service	$900.00		
Printing, Postage, Telephone, etc.	282.11	$1,182.11	
Purchase of Securities:			
U. S. Savings Bonds		9,990.00	
TOTAL DISBURSEMENTS			$11,172.11
BALANCE—SEPTEMBER 30, 1946			$ 4,598.38

CONSTITUTION AND BY-LAWS

MEDICAL SOCIETY OF VIRGINIA

(As Revised and Adopted at Annual Meeting at Virginia Beach, October, 1946)

CONSTITUTION

ARTICLE I—TITLE

The name of this organization shall be the Medical Society of Virginia. The words "the Society" in this constitution and its By-Laws shall be construed to mean "the Medical Society of Virginia".

ARTICLE II—PURPOSES

The purposes of this Society are to promote the science and art of medicine, the protection of public health, and the betterment of the medical profession.

ARTICLE III—COMPONENT SOCIETIES

The State of Virginia shall be divided into component medical societies of one or more counties. The Constitution and By-Laws of these societies shall be in conformity with those of the State Society, and the principles of Medical Ethics of the American Medical Association shall govern the members.

ARTICLE IV—COMPOSITION OF THE SOCIETY

White physicians in Virginia, not practicing sectarian medicine, members of a component society, are eligible to active membership. Provision may be made for associate membership.

ARTICLE V—OFFICERS

The officers of the Society shall be a President, a President-elect, who shall succeed to the Presidency the following year; three Vice-Presidents, and an Executive Secretary-Treasurer. The office of the Executive Secretary-Treasurer may be held by a non-member.

The officers shall be elected during the annual session of the House of Delegates, and will begin service at the adjournment of the annual session and continue until the end of that term, or until a successor qualifies. The term of office shall be for one year.

ARTICLE VI—COUNCIL

The Council shall have charge of the business affairs of the Society when the House of Delegates is not in session, and shall prepare and present a budget for the ensuing year to the House of Delegates at its first session. The Council shall consist of one member from each Congressional district of the State, together with the President, President-Elect, First Vice-President, and Immediate Past President. The Editor and State Health Commissioner shall be ex-officio members of the Council.

ARTICLE VII—HOUSE OF DELEGATES

The House of Delegates shall be the business and legislative body of the Society, and its membership shall consist of the delegates elected by the component societies, the President, the President-Elect, the First Vice-President, and the members of the Council.

ARTICLE VIII—STANDING COMMITTEES

The Standing Committees of the Society shall be: (1) Publication and Program, (2) Scientific Exhibits and Clinics, (3) Department of Clinical and Medical Education, (4) Legislation, (5) Medical Economics, (6) Membership, (7) Ethics, and (8) Judicial.

ARTICLE IX—ANNUAL SESSION

There shall be an annual session of the Society and the date and place of the meeting shall be determined by the House of Delegates, but at its discretion, these may be selected by the Council.

ARTICLE X—FUNDS

Funds for the Society may be raised by a per capita assessment, voluntary contributions and other business activities. The funds shall be expended to carry out the general purposes of the Society.

ARTICLE XI—SEAL

The Society shall have a seal bearing date of organization of the Society. The power to change or renew the seal shall rest with the House of Delegates.

ARTICLE XII—BY-LAWS

The Society may adopt by-laws not in conflict with this Constitution.

ARTICLE XIII—AMENDMENTS

This Constitution may be amended at an annual session by a two-thirds vote of the House of Delegates, and ratified by a general meeting of the Society, provided such amendment is previously published in the official publication of the Society before the annual meeting. All previous Constitutions of the Society are repealed when this Constitution is adopted and put into effect.

ARTICLE XIV—WHEN IN FORCE

This Constitution as revised shall be in force upon its adoption by the House of Delegates, and ratification by a general meeting of the Society.

BY-LAWS

ARTICLE I—MEMBERSHIP IN THE SOCIETY

Section 1—Members of the Society are classified as active and associate. Active membership is based upon membership in a component society.

Members in good standing in component societies are eligible for active membership in the Society. All physicians in good standing in counties in which there is no component society, provided they meet all the requirements of the State Society, and have the endorsement of the present members of the Society from such county, are also eligible.

Active members, who move out of the State, become associate members of the Society. Teachers of sciences

allied to medicine and medical officers of the Army, Navy and Public Health Service, temporarily stationed in Virginia, may be elected to associate membership through component societies, or by the Membership Committee. Associate members may resign membership by giving notice to the Executive Secretary-Treasurer, or, on recommendation of the Ethics Committee, be suspended or expelled by the House of Delegates for sufficient cause. Any associate member, eligible to membership in a component society, may be required by the Council to make application for membership in such component society.

Section 2—No one shall be enrolled as an active or associate member of this Society until the Executive Secretary-Treasurer has received his or her prorated annual dues.

Section 3—The privileges of voting, holding office, and serving on committees is limited to the active membership. In all other respects the status of the active and associate members is the same.

Section 4—For long, faithful or distinguished service, the House of Delegates, upon recommendation of the Membership Committee, may elect annually two resident members and one non-resident physician to honorary, active or associate membership.

Section 5—Every member, after verification of good standing from the rolls, shall register and be given a membership badge before taking part in any of the proceedings of the annual session. All badges shall be furnished by the Society.

ARTICLE II—DUES

Section 1—There shall be an annual assessment for each calendar year of $25.00 upon each active member who has been licensed to practice more than five years, payable in one or more installments before December 31st of that year. Those who have been licensed to practice for five or less years shall be assessed $15.00 for each calendar year. Dues for associate members shall be $7.00 for each calendar year. Dues shall be pro-rated on a monthly basis for those joining during the year.

Section 2—The fiscal year of the Society for membership shall correspond with the calendar year.

Section 3—Honorary members or other deserving it, at the discretion of the President, will be exempted from the payment of annual dues. Any member over seventy (70) years of age upon his request may be so exempted by the Executive Secretary-Treasurer.

Section 4—The Executive Secretary-Treasurer is charged with the duty of collecting or adjusting past due per capita assessments, after conference with the President, and, if necessary, the Councilor of the district in which the member in arrears resides. A member, whose dues are twelve months in arrears, shall be dropped automatically from the rolls of the Society. Should such member later apply for membership, his application shall be accompanied by five dollars in addition to the dues of the current year.

ARTICLE III—COMPONENT SOCIETIES

Section 1—The component societies shall be those holding charters from the Society.

Section 2—There shall be only one component society in a county. A component society may embrace one or more counties. When a component society qualifies, it may obtain a charter upon application to the Executive Secretary-Treasurer, said charter to be signed by the President and the Executive Secretary-Treasurer. Should it seem desirable that a county unite with a county or counties in an adjoining congressional district, as a component organization, such action may be taken provided it be sanctioned by the councilor from each of the districts concerned. Such component organization shall be deemed to be in the jurisdiction of the councilor of the district in which the majority of the membership resides.

Section 3—A component society consisting of two or more counties may upon petition to the Council be divided and given separate charters, if the Council is of the opinion that such division is in the interest of medical organization.

Section 4—Each component society shall judge the qualification of its own members.

Section 5—A component society shall drop from its roll a member whose license to practice medicine in the State has been revoked or whose membership in the State Society has been lost on account of misconduct.

Section 6—A member expelled by the component society can appeal to the State Society through the Ethics Committee.

Section 7—A member may join a more convenient component society in an adjoining county, provided the component society of the county in which such member resides gives its consent.

Section 8—Each component society shall send to each annual meeting of the Society its number of delegates and alternates fixed by Article V, Section 2, of the By-Laws.

Section 9—The Secretary of each component society shall keep a roster of its members, including name, address, year of graduation, college, date of State license, and such other information as may be desired by the Society. Once a year, not later than July the 1st, the Secretary of each component society shall send a list of its members to the Executive Secretary-Treasurer of the State Society.

Section 10—The component societies shall co-operate with the officers of the State Society to carry out the plans, laws and purposes of this organization.

ARTICLE IV—GENERAL MEETINGS

Section 1—The general meetings of the Society are open to all registered members and guests.

Section 2—At each annual meeting there shall be an address by the President and by two or more invited guests.

Section 3—With the exception of the address by the President and invited guests, no address, paper, or other contributions on the program shall be longer than fifteen minutes.

Section 4—No one shall discuss a paper more than once and then for only five minutes, except the leader of the discussion of a selected symposium, who may be allowed a maximum of ten minutes.

Section 5—No contribution shall appear on the program unless the title is sent to the Executive Secretary-Treasurer within the time designated by the Program Committee and only then with the endorsement of this committee. No member may present more than one paper at an annual session.

Section 6—If the author is not present when a paper is called, it shall be placed at the end of that section of the program. An author who has been absent twice without having submitted a typewritten paper to the Secretary for publication shall be debarred from the program for two (2) years.

Section 7—All papers and contributions are the property of the Society and cannot be published elsewhere without the consent of the Publication Committee.

Section 8—The scientific work of the Society may be divided into two or more sections.

Section 9—In a general meeting, after the program of a section is completed and before the House of Delegates adjourns, a member may initiate any business matter not previously considered in the House of Delegates, to be acted upon by the general meeting of the Society, provided a quorum of fifty (50) members be present in the general meeting.

Section 10—A rule governing the program or conduct of a general meeting may be changed only by a two-thirds vote of the members present.

ARTICLE V—HOUSE OF DELEGATES

Section 1—The first assembly of the House of Delegates shall be held on the first day named for the annual session. Subsequent meetings shall be held at hours which will not conflict with the scientific program. The reports of committees and of the Executive Secretary-Treasurer shall be published in the official publication of the Society prior to the annual session. These reports may be discussed and amended by the House of Delegates. Discussions shall be limited to five minutes.

Section 2—Each component society shall elect annually to membership in the House of Delegates, one delegate and one alternate for each thirty-five (35) members or major fraction thereof, or as the component society may elect, one delegate and one alternate from each county in such component society. In any event, each component society is entitled to at least one delegate or one alternate in the House of Delegates. In case the full number of delegates accredited to a component society are not present at the meeting of the State Society, those members present from such component society shall, from members of that society present, elect or appoint a sufficient number of delegates to complete its quota.

Section 3—Thirty delegates representing at least ten component societies shall constitute a quorum of the House of Delegates.

Section 4—The President shall preside over the meetings of the House of Delegates. The Executive Secretary-Treasurer shall be the Secretary.

Section 5—If the elegibility of any member is questioned, the President may appoint a committee on credentials to report on such member or refer the case to the Committee on Ethics.

Section 6—The House of Delegates shall elect officers of this Society as provided for in Article VI of the By-Laws.

Section 7—The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the constitution and by-laws of that organization. Such delegates shall be elected by ballot, and each member will be allowed to vote for as many of the nominees on the ballot as there are delegates and alternates to be elected. Those receiving the highest votes will be declared elected as delegates and those receiving the next highest votes will be declared elected as alternates.

Section 8—The House of Delegates shall nominate to the Governor of Virginia at the proper time in accordance with the laws of Virginia, members of the State Board of Medical Examiners.

Section 9—The House of Delegates, at each annual session, shall have authority to approve, modify or reject the budget recommendations presented by the Council for the ensuing fiscal year. In case a budget is not presented by the Council, the House of Delegates shall have authority to prepare the budget.

Section 10—The House of Delegates may revoke the charter of a component society for violation of the laws of the Society.

Section 11—The House of Delegates may appoint special committees from its own membership or from the membership of the Society.

Section 12—The Executive Secretary-Treasurer shall make a complete yearly report to the House of Delegates at each annual session.

ARTICLE VI—ELECTION OF OFFICERS

Section 1—The House of Delegates, at its first meeting, shall elect from its membership a Committee on Nominations, consisting of one member from each Congressional District who shall be nominated by the delegates present from that district and, in event a district is not represented in the meeting, such nomination shall be made by the President. This committee shall report to the House of Delegates the result of its deliberations in the form of a ticket containing the names of one or more members for each of the offices to be filled at the annual session. Nothing in this section shall be construed to prevent additional nominations being made from the floor by members of the House of Delegates. The election of officers shall be by ballot and a majority vote is necessary for election. The lowest nominee will be dropped on each ballot until one receives a majority vote. In case of a tie, the president shall cast the deciding vote.

Section 2—Only active members in good standing are eligible to office.

Section 3—The House of Delegates shall at each annual session elect a President-elect for a term of one year. At the end of this term, the President-elect shall automatically become President for a term of one year.

Section 4—The House of Delegates at each annual session shall elect three (3) vice-presidents to rank accordingly, these to represent the various sections of the State, as far as possible.

Section 5—The House of Delegates shall at each annual session elect an Executive Secretary-Treasurer for a term of one year.

Section 6—On the second day of the annual meeting of the Society at such time and place as shall be designated by the President, Councilors shall be elected for a term of two (2) years by the delegates from their respective Councilor Districts, those from the odd numbered Councilor Districts on odd years, and those from the even numbered Councilor Districts on the even years. At this time should there be a vacancy in the membership of the Council and the district not represented in the meeting, the House of Delegates, on nomination by the President, shall elect a Councilor for that district.

Section 7—In case there is a vacancy in the office of President-elect, or in case the President-elect was appointed pro tempore by the Council, the House of Delegates at the annual session shall also elect a President for the following term.

ARTICLE VII—DUTIES OF OFFICERS

A. *President*

Section 1—The President shall be the executive head of the Society.

Section 2—The President shall be the presiding officer at the general meetings of the Society, president of the House of Delegates, chairman of the Council, and ex-officio member of all committees. The President shall vote in the general meetings, in the House of Delegates, and in the Council only in the case of a tie. If the President or the President-elect cannot be present, a Vice-President shall preside over the general meetings, the House of Delegates, the Council or special scientific sections.

Section 3—The President shall deliver the annual address and shall have the privilege, after conference with the chairman of the Program Committee, of inviting two or more guest speakers for the annual session.

Section 4—The President, in conjunction with the Committee on Publication and Program, shall prepare the annual scientific programs.

Section 5—The President shall fill any vacancy occuring between annual sessions in the Council, delegates to the American Medical Association, and standing committees, and such appointments shall be valid until the end of the next annual session. He shall appoint any necessary special committees at the time he takes office, or during the year.

Section 6—The President shall visit as many of the component societies of the State Society as possible during the year, in the interest of the Society, actual expenses incurred being paid in accordance with budget determined upon by the House of Delegates.

B. *President-Elect*

Section 7—The President-Elect shall be an ex-officio member of the House of Delegates and an ex-officio member of the Council. The President-Elect shall act for the President in his absence or temporary disability, and shall automatically succeed to the presidency at the end of the term.

Section 8—The President-Elect, at the annual session when he assumes the office of President, shall appoint one member in place of the retiring member on each standing committee and shall name the chairmen of the standing committees for the ensuing year. Announcement of these names shall be made at the general meeting when he assumes office.

C. *Vice-Presidents*

Section 9—The Vice-Presidents shall assist the President in the discharge of his duties and the Councilors in their districts in the organization of component societies. In event of the permanent disability, death or resignation of the President, a Vice-President, according to rank, shall succeed him for the remainder of his term of office.

D. *Executive Secretary-Treasurer*

Section 10—The Executive Secretary-Treasurer of the Society shall be the executive agent of the Society, the secretary of the general meetings, secretary of the House of Delegates, secretary of the Council, and general manager of the official publication of the Society.

Section 11—The Executive Secretary-Treasurer shall be the custodian of all property of the Society, provide for registration of members at general meetings, conduct the general correspondence of the Society, and, with the consent of the President, employ necessary assistance.

Section 12—The Executive Secretary-Treasurer shall collect all money due the Society and pay out these funds upon written order of the President, or upon his designated authority. The Executive Secretary-Treasurer shall be bonded as approved by the Council.

Section 13—At a time designated by the Program Committee the Executive Secretary-Treasurer shall mail notices to members, asking for papers and shall, under the direction of the Publication and Program Committee, prepare and send to each member a program of the annual session.

Section 14—The Executive Secretary-Treasurer shall make a complete yearly report to the House of Delegates at each annual session.

ARTICLE VIII—COUNCIL

Section 1—The Council shall consist of the President, President-Elect, First Vice-President, the immediate past President and one member from each Congressional District. The Council shall be the executive and finance committee of the House of Delegates and shall have charge of the business affairs of the Society when the House of

Delegates is not in session. The President shall be the chairman of the Council and the Executive Secretary-Treasurer shall be its secretary. The Editor and State Health Commissioner shall be ex-officio members of the Council.

Section 2—Each Councilor shall be the organizer, advisor and censor for his district. Each Councilor may visit each component society in his district once a year either on invitation or as may be necessary.

Section 3—Four members of the Council together with the President or First Vice-President shall make a quorum. Actual expenses may be paid members attending meetings of the Council in the interim between the annual sessions.

Section 4—At each annual session, the Council shall present a budget for the next fiscal year, based on the expected income and expenditures during this period, which budget shall be presented to the House of Delegates for its approval.

Section 5—The Council shall be charged with the duty of organizing the whole state into component societies, and, at each annual session, shall report on this work to the House of Delegates, with recommendations. The Council shall recommend to the House of Delegates the revocation of a charter of a component society when such component society flagrantly violates the rules of the Society.

Section 6—The Council shall provide offices for the Society headquarters.

Section 7—Each Councilor District shall have a district council composed of members from each county, the State Councilor of that district to act as chairman. The purpose of these district councils is to bring the individual physician of the county in closer contact with the Society and its needs.

ARTICLE IX—STANDING COMMITTEES

The Standing Committees of the Society shall be as follows:

1. Publication and Program.
2. Scientific Exhibits and Clinics.
3. Department of Clinical and Medical Education.
4. Legislation.
5. Medical Economics.
6. Membership.
7. Ethics.
8. Judicial.

Each of these Committees, with the exception of the Department of Clinical and Medical Education, the Committee on Medical Economics, and the Committee on Legislation, shall consist of three members, whose term of office shall be for three years. The members having first been appointed for one, two and three years, the incoming President shall appoint to fill vacancies created by expiration of term of office, and shall name the chairman of each committee. No member may serve on more than one standing committee the same year.

The Department of Clinical and Medical Education shall consist of the State Health Commissioner, the immediate ex-president, who shall be chairman; one member each from the two medical schools of the State, and two members of the Society from the State at large, the last four to be appointed by the incoming President.

The Committee on Medical Economics shall consist of six members, whose term of office shall be for three years, two to be appointed each year by the incoming President, and the Committee on Legislation of nine members, three to be appointed each year by the incoming President. He shall also name the chairman.

All committees shall make reports annually to the House of Delegates. The chairman of all standing or special committees not members of the House of Delegates, shall have the privilege of the floor when reporting to the House or in any incidental discussions.

Actual expenses of members of such committees required to do official work in the interim between annual sessions may be paid upon the recommendation of the chairman of such committees and the endorsement of the President, if presented within thirty days after the meeting, provided budget allowance be made for such purpose in accordance with Art. VIII, Section 4.

All unexpended balances of any fund authorized in the budget shall on or before September 30th of each year revert to the general treasury.

Publication and Program

Section 1—The Committee on Publication and Program shall conduct the affairs of the official publication of the Society in accordance with the expressed policy and adopted budget of the Society. Its chairman shall be Editor of the official publication of the Society. He may attend the meetings of the Council and House of Delegates and have the privilege of the floor in these bodies. This Committee shall also have charge of the preparation of the annual program.

Scientific Exhibits and Clinics

Section 2—The Committee on Scientific Exhibits and Clinics shall have charge of the scientific exhibits and clinics for the annual sessions, in co-operation with the President. This committee shall endeavor to stimulate interest in scientific and research work among the members of the Society, and may institute appropriate methods to this end.

Department of Clinical and Medical Education

Section 3—The Department of Clinical and Medical Education shall endeavor to bring about co-operation of the Society with the medical schools, hospitals, clinics, and other teaching institutions of the State with the idea of maintaining the highest standards in these institutions; and to use every means to encourage and advance medical science, and bring it within easy reach of the postgraduate practitioners of the State. The retiring President shall be chairman of this Committee.

Legislation

Section 4—The Committee on Legislation shall endeavor to secure and enforce legislation in the interest of public health, scientific medicine, and the moral, social,

fraternal, and ethical betterment of the medical profession in the State.

Medical Economics

Section 5—The Medical Economics Committee shall be the Committee to which are referred all questions of the business relationships of the Society.

Membership

Section 6—The Committee on Membership shall pass upon the applications for membership of those not members of a component society and make recommendations for honorary membership. The Committee shall also, through co-operation with component societies and the Executive Secretary-Treasurer, prepare proper obituaries for deceased members.

Ethics

Section 7—The Committee on Ethics shall consider all matters involving ethics and conduct of members on appeal from the component societies and may act independently in cases not under the jurisdicition of a component society.

All charges against any member shall be in writing, specifically stated, and signed by the accuser. The individual accused and under investigation shall be entitled to a personal hearing or representation. No charge against a member shall be heard by the Society or the House of Delegates, unless it has first been referred to the Committee on Ethics.

No motion or discussion of expulsion, suspension or other censure of any member shall be allowed unless such member shall have been given two months' notice through the Committee on Ethics. The committee shall make its report to the House of Delegates at the first meeting during the annual session.

No member shall be expelled from the State Society except by a vote of three-fourths of the members of the House of Delegates present. Should the member come forward within twelve months succeeding his or her expulsion and offer satisfactory explanation, he or she may be reinstated, provided three-fourths of those present in the House of Delegates concur.

Judicial

Section 8—The Judicial Committee shall study the Constitution and By-Laws of the Society and suggest necessary revisions and interpret its provisions in case of conflict or doubt as to specific meaning.

ARTICLE X—OFFICIAL PUBLICATION

The official publication of the Society shall be known as the VIRGINIA MEDICAL MONTHLY. Publication of the journal shall be under the control of the Publication and Program Committee which shall co-operate in every way with the various committees of the Society for the good of the organization.

ARTICLE XI—ETHICS

The ethical principles governing the members of the American Medical Association shall govern the Society.

ARTICLE XII—RULES OF ORDER

The deliberations of the Society shall be conducted in accordance with parliamentary usage as defined in Roberts Rules of Order.

ARTICLE XIII—AMENDMENTS

These By-Laws may be amended by a two-thirds vote of the House of Delegates, provided such amendment is proposed in writing and has laid on the table for at least one day. All previous By-Laws of this Society are repealed when these By-Laws are adopted and put into effect.

ARTICLE XIV—WHEN IN FORCE

These By-Laws shall be in force upon adoption by the House of Delegates and ratification by a general meeting of the Society.

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EDITORIALS

The Annual Meeting

THE first post-war annual meeting of the Medical Society of Virginia is now a thing of the past. It might be discussed appropriately under four headings: good attendance, good program, good discussions and good time. Five hundred and twenty-six doctors and seventy-two auxiliary members registered. There were ninety-five exhibitors. Perhaps the most important action of the House of Delegates was the raising of the dues to twenty-five dollars for those members who have been licensed to practice for more than five years and fifteen dollars for other active members. The dues of the associate members were not changed. This change will give the Society sufficient funds to carry on an active public relations program.

The program was a varied one ranging from surgery to psychosomatic medicine. Every essayist was present and with few exceptions those who were on the program to open the discussions were on hand. Most of the papers provoked a full general discussion. In spite of this the program went off on time, although the time that was allotted for visiting the exhibits had to be curtailed.

Perhaps the best part of the meeting was the spirit of good fellowship that prevailed. Everyone seemed to be having a good time and friendships, that in some instances began more than forty years ago, were renewed. The three stated social affairs, Dr. and Mrs. Rawls' cocktail party, the dinner and the dance were quite enjoyable, albeit somewhat crowded. In fact the crowd seemed to enhance the gaiety. Our guests, Dr. George F. Lull, Secretary and General Manager of the American Medical Association, and Dr. Joseph S. Lawrence, Director, Council on Medical Service and Public Relations, American Medical Association, gave us good addresses, but are mentioned here because they fitted so well into the social picture. Ed Harper was put down as a guest, as he represented the Veterans Administration, and although he functioned well as a representative of the VA no one considered him a guest.

Finally, we must say a good word for the Cavalier Hotel. Although the hotel was taxed, over-taxed in fact, to capacity, the management met the situation with cheerful efficiency. The food was delectable and the service was prompt and efficient. All in all the meeting was one that will long be remembered.

Ira Remsen, 1846-1927

THE celebration at Johns Hopkins University of the one-hundredth anniversary of Dr. Remsen's birth reminds us of how new the science of chemistry is. Medical men are prone to look upon chemistry as old—dating back at least to Paracelsus (1493-1541). As a matter of fact oxygen was not discovered until 1772 and even then Priestley did not understand what he had discovered. It was not until 1775 that Lavoisier first grasped the importance of oxygen. Chemistry without oxygen is like surgery without anesthesia or asepsis, and medicine without the germ theory.

Thus the science of chemistry is about as young as the United States, and American chemistry is coeval with Ira Remsen. When Remsen graduated in medicine from the College of Physicians and Surgeons in 1867, only a few trained chemists were teaching anywhere in this country. To satisfy his bent for chemistry he went to Germany. He received his Ph.D. at Göttingen for work with Fittig and was Fittig's assistant for two years before returning to this country. When he came home in 1872

he had difficulty in finding a position and finally accepted a teaching post at Williams College. Here he found meagre facilities—no research laboratories—for the college expected chemistry to be taught in the classical tradition as a cultural subject. However the college soon furnished him with a research laboratory, and Remsen continued the work he had started in Germany. In 1876 when Johns Hopkins University started, with an emphasis on graduate studies in science, Remsen came as the first professor of Chemistry. As Dr. Benjamin Harrow says in his book *Eminent Chemists of Our Time* "Remsen was the first professor of chemistry at the first institution ever established in America for graduate work. . . . As teacher, as research worker, and as a writer he is more directly responsible for the development of the science in the United States than any other man." President Isaiah Bowman in introducing Professor Roger Adams, the first Remsen Memorial Lecturer, said that more than a million students have used Remsen's text-books. Men personally trained by Remsen occupy responsible positions in the teaching and research laboratories of the nation, and it is due to these men in large measure, that when World War I cut off the supply of German chemicals, medicines, and dyes, American Chemistry rose to the occasion and met the nation's needs.

The closing paragraph of Professor Adams' lecture deserves wide consideration. "The strength of a country has depended in the past on its possessions, in earlier days on land, its control of transportation and waterways, or its supply of raw materials, but today a nation's strength will be largely in the quality of its scientists. Governments must support the work of scientists but not control it in such a way as to hamper development or to direct it into military channels. . . . Nuclear energy, the scientific discovery of the present day which has shown its power to destroy, will undoubtedly be turned from instrumentalities of war to applications for the welfare of all."

If

IF you specialized in the treatment of a loathsome disease for which there is a practically perfect laboratory diagnosis in any of its stages; and if you had effective remedies for this disease which were supplied to you in unlimited quantities, *gratis*; and if you were endowed so that your services cost the patient nothing; and if you had legal authority to compel the patient to take the treatment whether he wanted to or not, what would your percentage of cures be? The U.S.P.H. Service (under whose Surgeon-General, Senator Wagner et al. propose to put all hospitals and medical care) reports that it is able to follow nineteen per cent of syphilitics to a complete cure.

Dr. Halsted's Operating Table

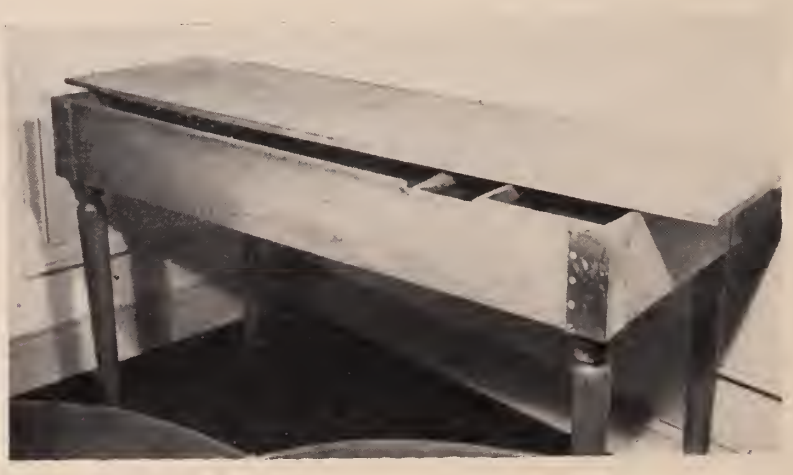
DR. WARTHEN'S delightful sketch of Dr. Halsted in the September *Monthly* (p. 403) reminds us that one of the two tables used by Dr. Halsted in his epoch making work is in the museum of the Richmond Academy of Medicine. When the surgical pavilion was built at Hopkins the old outmoded tables were relegated to the accident room. Here they were rapidly going to pieces under the hard usage, or rather abuse. In 1932 Dr. Warthen, who was at that time resident surgeon, made a proposition to Winford Smith, the superintendent, that he would give him a new table in exchange for one of the old tables for the Richmond Academy of Medicine. This made Dr. Smith realize the importance of preserving the tables and he cleaned up

one and put it in the hospital's museum and gave the other to Dr. Warthen, who in turn gave it to the Richmond Academy of Medicine.

The table is of stout oak, strengthened at the corners by copper plates. The top is really a rectangular trough 62 inches long, 25 inches broad and 3 inches deep. There is a drain hole in the center of the bottom of the trough. Across the top is an oaken board somewhat longer than the trough. When in use this was covered with a folded blanket. A smaller board that moved in a recessed track at right angles to and underneath the long board served as an arm board. The table in the Academy of Medicine is complete except for two triangular blocks that rested in either end of the trough. These blocks lacked about an inch of reaching to the top of the trough. An essential part of the table was a big Irish orderly. The students called him "Surgical John". What his last name was, we never knew. Surgical John could lift the largest patient from the stretcher to the table as tenderly as if he were a baby. If the Professor wanted the patient in a Trendelenburg position, John would draw the board back until the head end rested on the triangular block. He then lifted the foot and supported it on his shoulder as immobile as a statue. For the Fowler position John went through the same procedure at the head of the table.

To modern eyes this old table seems extremely crude, and yet some of the finest surgery the world has even seen was done on it. Rubber gloves in surgical operations were first used on this table. The radical operation for cancer of the breast was developed on this table. Dr. Halsted devised his operation for the cure of hernia on this table at the same time that Bassini was developing his operation in Italy. Both operations are still being used today. The modern thyroid operation was performed on this table. Much of the fundamental work on sutures and wound closure and on intestinal anastomosis was done on this table.

The old table has outlived its usefulness, but it still has a never to be forgotten message for us today; namely that the important thing is the man. It matters not whether the patient is lying on an oaken board or a slab of monel metal that can be put into any shape or position by levers in the reach of the anesthetist, the essential thing to the patient is the person who holds the scalpel.



PRESIDENT'S MESSAGE

TO MEMBERS OF THE MEDICAL SOCIETY OF VIRGINIA:

THERE are certain pressure groups, both within and without the Government, which have presented to the Congress, for the past four sessions, bills which if passed would have entirely changed our way of life and stifled anything suggesting free enterprise in the practise of our profession. During the 79th Congress extensive hearings were held by the Senate Committee on Education and Labor. This particular bill was never reported out of the Committee, but we can rest assured that it will make its appearance in some form in the 80th Congress and, in all probability, will be in a more vicious form than the last. The defeat of this bill was accomplished by the work and testimony of witnesses who were gathered from professional groups, such as the American Medical Association, the National Physicians' Committee, and men from various state societies who have an active Department of Public Relations and Medical Service. Virginia had no part in this.

During this year your excellent Committee on Public Relations and Medical Service, after interviewing numerous applicants, selected Mr. Henry S. Johnson to head this department. He was sent to various states which had excellent similar departments to study their methods and determine, with the Committee and the Council, the best course to pursue. An estimated budget of $30,000 for this department was presented to the House of Delegates at the meeting at Virginia Beach. This was approved.

The only source of income that the Society has is from the advertising in the Journal and dues from the members of the Medical Society of Virginia. The income from the Journal could not be increased and it was determined by the House of Delegates to increase the dues of the members of the Society to $25 for those who had been registered for five years or more and $15 for those of less than five years. In this way Virginia physicians will feel that they at at least contributing their part to combat this trend towards Bureaucratic Medicine. This is a comparatively small amount when taking into consideration the dues in other states. California, where they have had to fight State Medicine, has dues of $118 and the Los Angeles County Society has dues of $100.

The medical profession of Virginia has taken a more or less complacent attitude regarding the efforts to regiment the profession, as well as the laymen, of these United States and it is time we put forth every effort to prevent this type of medicine being foisted upon us. It is hard for us to understand why certain groups should wish to change the type of medical care which has given the people of this country the best in the world and has given incentive to the men in our profession to continue to study and keep up with the rapid improvements in the medical world.

There was some discussion at our last meeting as to the effect this slight increase in dues would have on the number of members in our Society. Personally, I do not feel that there are many members in our Society who would not want to do their part in preserving our freedom of action. We must realize that every member of our profession must make sacrifices, both personal and financial, to combat any system being instituted that would interfere with our American way of life. The profession in Virginia during the war period has made such personal sacrifices in supporting the war effort, in order to maintain our way of life, that I cannot feel that any member would resent having dues increased to continue this effort in time of peace.

W. L. POWELL, PRESIDENT,
Medical Society of Virginia.

SOCIETIES

Lynchburg Academy of Medicine.

On November the 4th, the Academy had a dinner meeting at the Virginian Hotel, at which the president, Dr. Edwin A. Harper, presided. Following the dinner, Dr. J. T. T. Hundley, a delegate to the Virginia Beach meeting of the State Society, was called upon for a brief report. Applications for membership were presented from two doctors and, according to the By-Laws, these were tabled for thirty days, to be acted upon by the Board of Trustees.

After the business session, the guest speakers, Dr. Austin T. Moore, orthopedic surgeon of Columbia, S. C., and Dr. Gayle Crutchfield, neurosurgeon of the University of Virginia, Charlottesville, spoke on "Low Back Pain". Both talks were enjoyed immensely, and there was considerable discussion by several of those present. Dr. Roy Hoover, orthopedist of Roanoke, and Dr. Wesley Coke, Dr. Moore's assistant, were also guests at this meeting.

H. W. HOLLINGSWORTH, M.D.,
Secretary-Treasurer.

Virginia Peninsula Academy of Medicine.

There was an attendance of 60 at the October meeting of the Academy on Monday the 21st. The guest speaker was Dr. William L. Thomas, Associate Professor of Obstetrics and Gynecology, Duke University Medical School, Durham, N. C., who came upon the invitation of Dr. Waverly R. Payne of Newport News. He spoke on "Pruritus Vulvae". He was accompanied by Mr. C. P. Jones, Bacteriologist, who spoke on the flora and infections of the vagina.

The Virginia Peninsula Academy of Medicine is now in its eleventh year. It was organized in 1935 by Dr. Clarence Porter Jones, Sr., Dr. Edward L. Alexander, and Dr. Horace G. Longaker, all of Newport News; and Dr. E. N. Schillinger and Dr. Frank S. Bacon of the Veterans Administration Hospital, Kecoughtan, Va.

Dr. Robert H. Wright, Jr., Phoebus, is president of the Academy and Dr. Chester D. Bradley, Newport News, secretary-treasurer.

Dr. Joseph Hughes, psychiatrist at the Philadelphia General Hospital, addressed the Academy at its November meeting, his subject being "Emotional Problems Seen in Practice". There was an attendance of 75 at this meeting.

NEWS

Are You a Fellow of the American Medical Association?

The American Medical Association is going to celebrate its centennial in Atlantic City, June 9-13, 1947. Elaborate plans are being made for this celebration.

Only Fellows and Invited Guests are eligible to attend. Membership in your state society is the primary qualification for Fellowship in the A.M.A. Fellowship dues and subscription to *The Journal* A.M.A. are both included in one annual payment of $8.00, which is the cost of *The Journal* to subscribers who are not Fellows.

If you are not a Fellow and plan to attend the Atlantic City session, which will be a milestone in medical history, you can save yourself considerable time and confusion when registering, if you will write now to the American Medical Association, 535 North Dearborn Street, Chicago 10, and ask if you are eligible to become a Fellow.

The Committee on National Emergency Medical Service,

Created by the House of the Delegates of the American Medical Association by its House of Delegates in December 1945, has sent questionnaires to 45,000 discharged medical officers. As this committee is expected to make recommendations that will lead to better utilization of medical skills and resources in a future emergency, doctors who received the questionnaires are urged to supply information requested and return them promptly.

Dr. Everett I. Evans,

Associate professor of surgery, Medical College of Virginia, has been named a member of the committee of surgery of the National Research Council. He is one of two men from the South named to this committee which will act as an advisory body to the surgeons-general of the U. S. Army and Navy and the medical officer of the Veterans Administration.

Dr. M. S. Fitchett,

Norfolk, has been appointed by Governor Tuck to the State Board of Medical Examiners for the second district. He succeeds Dr. P. St. L. Moncure, Norfolk, for a term expiring June 1951.

Richmond City Board of Health.

Drs. M. P. Rucker, Emily Gardner, and B. H. Martin have been appointed as members of the recently organized Richmond City Board of Health.

Personnel Changes, State Department of Health.

Dr. J. C. Neale, Jr., one of the assistant directors in the Bureau of Local Services, has been named director.

Dr. P. M. Chichester, also an assistant director in the Bureau of Local Services, has been named director of the Bureau of Tuberculosis.

Dr. Jack B. Porterfield, who recently resigned as Richmond Health Director, will return to the State Department in the Bureau of Local Services.

Dr. B. Randolph Allen has resigned as director of the Bureau of Communicable Diseases of the State Health Department, effective December 1, to join the medical staff of the Veterans Administration.

Dr. W. A. Browne, for sometime assistant director of the Richmond Health Department, succeeds Dr. Allen as of that date.

Dr. H. C. Bradford has been appointed Health Officer of Fairfax County, with headquarters in Fairfax. He assumed his duties as of November 1.

Dr. J. A. Fields has been appointed Health Officer of Halifax and Pittsylvania Counties, with headquarters in South Boston, and entered upon his duties there on November 15.

News from the University of Virginia, Department of Medicine.

On October 16th, Doctor Charles Mann, of E. R. Squibb & Sons, presented to the student body three films on the use of Penicillin:

"Penicillin in Medicine", by Harrison Flippin, M.D., of the University of Pennsylvania.

"Penicillin in Venereal Diseases", by J. R. Heller, Jr., Surgeon, U. S. Public Health Service.

"Penicillin in Surgery", by Frank Meleney, M.D., New York City.

Doctor Vincent W. Archer, Professor of Roentgenology, spoke at the Interstate Postgraduate Clinics in Cleveland, Ohio, on October 18th, on "Pitfalls in Spinal Diagnosis." Doctor Archer was elected President of the Virginia Radiological Society on October 15th.

Doctor H. B. Mulholland has been appointed a member of the Metabolic Disease Study Section of the National Institute of Health. He has also been appointed liaison member of the Committee to coordinate medical activities, formerly the Committee on Pre-war Medical Services.

Dr. R. A. Vonderlehr,

For the past year and a half director of the U. S. Public Health Service district in San Juan, Puerto Rico, has been transferred to Atlanta, Georgia, where he will be director of the U. S. Public Health Communicable Disease Center.

Postgraduate Medicine,

A new monthly journal, appears in January 1947, as the official publication of the Interstate Postgraduate Medical Association of North America. To this time the papers and clinics of this association have been published in one bound volume, and in recent years it has been impossible to publish much of the material and use many of the illustrations.

Among special features planned for the first issue are "This Month in Medicine"; a Department of Clinical Photography; a Consultation Service; Book Reviews; Association Notes; Clinical Notes on new drugs and instruments. Subscriptions should be placed with the business manager, Paul K Whipple, 515 Essex Building, Minneapolis, Minnesota.

Lasker Awards.

The American Public Health Association at its recent meeting in Cleveland made the first series of awards under the Albert and Mary Lasker Foundation. The individual awards consist of $1,000.00 and a gold statuette of the Winged Victory of Somotrace.

Dr. Carl Ferdind Corti of the Washington University School of Medicine was selected on account of his investigations of the storage and utilization of sugar in the body. Dr. John Friend Mahoney, Senior Surgeon, U. S. Public Health Service, received the award for research into the penicillin treatment of syphilis. The third award was presented jointly to the late Dr. Karl Landsteiner, Dr. Philip Levine and Dr. Alexander S. Weiner for their work on the Rh factor. The fourth award went to Dr. Alfred Newton Richards, professor of Pharmacology at the University of Pennsylvania for his work with penicillin production, anti-malarial remedies, protective measures against infectious diseases, insecticides and insect repellants, improved methods of blood transfusions, and physiology at high altitudes and high speeds. The fifth award went to Dr. Fred S. Soper for his successful fight against malaria and yellow fever.

Five group awards were also made. The individuals of the groups received silver statuettes. The groups that were honored were: the Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture; the Army Epidemiological Board; the National Institute of Health of the U. S. Public Health Service; the Northern Regional Research Laboratory of the Department of Agriculture; and the Board for the Coordination of Malarial Studies.

Postgraduate Courses.

The George Washington University School of Medicine is conducting its second annual series of Intensive Postgraduate Courses from January 27th through March 14, 1947. Arrangements may be made to take a special course or one in a combination of subjects. A distinguished guest faculty will supplement the local staff.

As registration in each course is limited, it is suggested that those interested communicate promptly with the Director of Postgraduate Instruction of the University, at 1335 H Street, Northwest, Washington, D. C. Living accommodations are available in hotels and private homes.

The Virginia Obstetrical and Gynecological Society,

At its regular meeting held at Virginia Beach, October 15, elected the following new members:

Dr. C. D. Bradley, Newport News.
Dr. Garrett Dalton, Radford.
Dr. A. Edward Drexel, Alexandria.
Dr. Gwendolyn Hudson, Richmond.
Dr. J. R. Kight, Norfolk.
Dr. Eleanor M. Littlepage, Norfolk.
Dr. Julien H. Meyer, Roanoke.
Dr. William T. Moore, Richmond.
Dr. John R. Saunders, Lynchburg.
Dr. Eric C. Schelin, Richmond.
Dr. George Speck, Alexandria.
Dr. William T. Thornton, Charlottesville.

Dr. H. Joseph Williams,

After practicing for sometime at Brownsburg, recently moved to Staunton and, in addition to his general practice and obstetrical work, he is Health Officer for the city of Staunton, and physician for Mary Baldwin College.

Dr. Arthur Hastings Taylor, class of '43, Medical College of Virginia, has taken over Dr. Williams' former location at Brownsburg.

Urology Award.

The American Urological Association offers an annual award "not to exceed $500" for an essay (or essays) on the result of some clinical or laboratory research in Urology. Competition shall be limited to urologists who have been in such specific practice for not more than five years and to residents in urology in recognized hospitals.

For full particulars write the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee. Essays must be in his hands before May 1, 1947.

The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Hotel Statler, Buffalo, New York, June 30-July 3, 1947.

Married.

Dr. Kenneth Cooper, Lynchburg, and Miss Natalie Irene Levy, Newburgh, N. Y., October 27. Dr. Cooper recently returned after three and a half years' service in the Army Medical Corps.

Dr. Nelson Saunders Payne and Miss Mary Cabell Anderson, both of Norfolk, on November 22. Dr. Payne is a graduate of the Medical College of Virginia, class of '44.

The Gill Eye, Ear and Throat Hospital

Will present its twentieth annual Spring Graduate Course in Ophthalmology, Otology, Rhinology, Laryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy in Roanoke, from April 7 to 12, 1947. The faculty for this course is listed in the advertising section, but the guests of honor will be Dr. Chester S. Keefer, Chairman of the National Research Council of Boston, Mass., and Dr. A. J. Ballantyne, Professor of Ophthalmology, University of Glasgow, and President of the British Ophthalmological Society, Glasgow, Scotland.

Information as to the course may be obtained from the Superintendent of the Hospital, Box 2467, Roanoke, Virginia.

Jefferson Medical College.

The Annual Lecture given by the Alpha Omega Alpha Honorary Medical Society of The Jefferson Medical College of Philadelphia was held in the Assembly Hall of the College on Thursday evening November 7, 1946.

The speaker was Dr. Charles Herbert Best, Professor and Head of the Department of Physiology and Director of the Banting-Best Department of Medical Research, University of Toronto, Canada.

Dr. William Lett Harris,

Norfolk, has retired from his position as director of School Health Service of that city, and has resumed the private practice of pediatrics, with offices at 1112 Matoaka Street, Norfolk.

Dr. William M. Moir,

Recently released from service in the Navy, has moved to Roanoke, where he will be engaged in the practice of internal medicine. After the first of the year, his offices will be at 811 Jefferson Street.

The Southeastern Allergy Association

Will hold its second annual meeting January 18 and 19, at the Atlanta-Biltmore Hotel, Atlanta, Georgia. Hotel reservations should be made directly with the hotel. Dr. Hal McCluney Davison, Atlanta, is president; Dr. J. Warrick Thomas, Richmond, vice-president; and Dr. Katharine Baylis MacInnis, Columbia, S. C., secretary-treasurer.

Course in Elementary Electrocardiography.

The Medical College of Virginia is offering a course in elementary electrocardiography for those physicians who desire the basic principles for understanding and interpreting electrocardiograms. This course will consist of morning and afternoon sessions, five days a week, for two weeks, February 3-14, 1947.

The first week will be devoted to didactic lectures and demonstrations, dealing with the basic principles of electrocardiography, the analysis of normal and abnormal electrocardiograms, and changes produced by specific diseases. The second week will consist of morning ward walks and clinics dealing with the practical application of electrocardiography, and afternoon sessions devoted to exercises in the interpretation of electrocardiograms.

Tuition for the course will be $25.00. A registration fee of $5.00 should accompany your application, the balance to be paid at time of enrollment. All checks should be made payable to the "Medical College of Virginia", and addressed to Dr. James P. Baker, Director of Continuation Education.

Dr. Austin I. Dodson,

Richmond, was one of the guest lecturers at the sixteenth annual fall clinical conference of the Oklahoma City Clinical Society, held in Oklahoma City, Oklahoma, October 28-31. His lectures were on "The Management of Urolithiasis" and "Nephroptosis and its Complications".

New Surgical Pavilion at Emory University Hospital.

On November 8 a new Surgical Pavilion was dedicated in the Whitehead Memorial Room at Emory University Hospital, Atlanta, Ga. This gift came from Mrs. Letitia Pate Evans, of Hot Springs, Va., mother of the late Conkey Pate Whitehead, of Atlanta. The memorial room has been designed by Mr. Phil Shutze, architect, of Atlanta, and the marvelous wood carving by Mr. H. J. Millard, who came from England about thirty years ago and for years has had a studio in Cincinnati, Ohio. The dedicatory address was given by Dr. Albert Blalock, professor of surgery in Johns Hopkins University.

Mrs. Evans has given generously to the surgical department of Emory University and has endowed the Joseph B. Whitehead Chair of Surgery now occupied by Col. Daniel C. Elkin, late head of the surgical service, Ashford General Hospital, White Sulphur Springs, West Va.

Dr. V. E. Lascara.

Formerly on the staff of the Central State Hospital, Petersburg, has moved to Raleigh, N. C., where he has accepted the position as assistant superintendent of Dix Hill Hospital. Besides his routine duties, Dr. Lascara supervises the veteran doctors affiliating from Duke University in their clinical psychiatry.

Dr. Edwin J. Palmer.

Recently relieved from active duty in Service, announces the opening of his office in Jefferson Building, Roanoke, for the practice of neurology and psychiatry with facilities available for inpatient administration of insulin and electro shock therapy.

New Books.

Among the recent books received at the Library of the Medical College of Virginia, which are available to our readers, are:

Bonnin—A complete outline of fractures..
Bridges—Job placement of the physically handicapped.
Clark—The tissues of the body.
Cullen—Anesthesia in general practice.
Ecob—The retarded child at home.
Epstein—Miracles from microbes, the road to streptomycin.
Fulton—Harvey Cushing.
Gay—Diagnosis and treatment of bronchial asthma.
Gordon—Abnormal behavior.
Gutman—Modern drug encyclopedia and therapeutic index.
Halsey—Color blind.
Hermann—Clinical case taking.
Kersley—The rheumatic diseases.
Lacassagne—Les cancers produits par les rayonnements corpusculaires.
Lacassagne—Les cancers produits par les rayonnements electromagnetique.
Lichtman—Diseases of the liver.
Luckiesh—The new science of seeing.
McBride—Disability evaluation.
McNeill—Roentgen technic.
Mason—Pre-operative and post-operative treatment.
Nurnberg—What's the good word?
Peters—Quantitative clinical chemistry. Interpretations.
Porter—Bacterial chemistry and physiology.
Powdermaker—Children in the family.
Reich—A clinical atlas of sternal bone marrow.
Russell—Practical malariology.
Slaughter—The new science of surgery.
Thoma—Traumatic surgery of the jaws.
Wright—Applied physiology.

Doctor Needed.

There is an immediate opening on the Medical Staff of the Clinchfield Coal Corporation, Dante, Va., for industrial practice. If interested, address Medical Director, Dante, Va. (*Adv.*)

For Sale—

Eye, ear, nose and throat equipment and instruments. If interested, write for detailed list and description. Dr. E. G. Hall, 720 Tyler Avenue, Radford, Va. (*Adv.*)

For Sale—

New Instomatic Cardiette. Delivery about December 1, 1946. Communicate with Box E, care VIRGINIA MEDICAL MONTHLY, 1200 East Clay Street, Richmond 19, Va. (*Adv.*)

For Sale—

GE X-ray, Model 1775; 30 ma; 85 KVP, table with Bucky; in excellent working condition. James P. King, M.D., Radford, Va. (*Adv.*)

Wanted—

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OBITUARIES

Dr. William C. Stephenson, Jr.,

Roanoke, died in that city on October the 3rd at the age of 45. He graduated in medicine from the University of Virginia in 1929, interning at the University Hospital and later at Roanoke Hospital. He was in general practice from July 1931 until his death, with the exception of a year as Captain in the Medical Corps of the U. S. Army.

At the regular monthly meeting of the Roanoke Academy of Medicine on November 4, 1946, the following resolutions were adopted:

The Roanoke Academy of Medicine wishes to express to the family of Dr. William Stephenson their sincere sorrow in his untimely passing. His intellect, his keen judgment and his kindness and service to all of those who came under his care won the admiration and love of his fellow practitioners. He knew no class distinction for those who needed his services, and the members of the Academy of Medicine were always aware of the large amount of charity work that he did for local institutions as well as his own private practice. No one devoted more of his time to the poor and unfortunate than he, and no one will be more greatly missed.

IT IS RESOLVED that a copy of this be entered upon the minutes of the Roanoke Academy of Medicine, and that copies be sent to the family, and the Virginia State Medical Society.

CHURCHILL ROBERTSON,
Chairman
ALLEN BARKER,
CHARLES H. PETERSON,
Committee.

Dr. John P. Haller,

Salem, died on October 24th. He was born in Wytheville on January 29, 1861, and was graduated from the Medical College of Virginia in 1882. He was in private practice in Crockett until 1895, when he became chief surgeon of the Pocahontas Fuel Company at Pocahontas. After his retirement in 1927, he made his home in Salem. He had been a member of the Medical Society of Virginia since 1883.

Dr. Oscar Winfred Carper,

Front Royal, died October 26th, at the age of forty-three. He was a native of Craig County and a graduate of the Medical College of Virginia in 1931. Dr. Carper had practiced in Front Royal for the past fourteen years where he had taken an active part in civic affairs. He was a past president of the Medical Society of Northern Virginia and secretary of the staff of physicians at the Front Royal Hospital. Dr. Carper had been a member of the Medical Society of Virginia for thirteen years.

Dr. William Oscar Pollard,

Speers Ferry, was fatally injured near his home on October 28th. He was sixty-nine years of age and a graduate of the Medical College of Virginia, class of 1904. Dr. Pollard had been a member of the Medical Society of Virginia since his graduation. His wife and six children survive him.

Dr. Leslie Leon Lumsden,

Pioneer in public rural health, died at his home in New Orleans on November 8th. He was seventy-one years of age, a native of Granite Springs, Virginia, and a graduate in medicine from the University of Virginia in 1894. Dr. Lumsden had been an officer in the U. S. Public Health Service for more than forty years and is said to have been the organizer of the first full time rural health department in this country. He retired from the service in 1939.

Six Persons Killed, 903 Hurt in 1946 Fireworks Accidents.

Six persons were killed and 903 were injured by fireworks accidents last Fourth of July, according to a survey just completed by the American Medical Association.

The number of persons injured in 1946 shows a decided drop in comparison with other years. Total injuries in 1941 were 2,039 and in 1940 they numbered 4,462.

"The states with the most striking improvement since 1941 are California, Massachusetts, Ohio and Rhode Island," *The Journal* says. "This is undoubtedly due to the fact that those four states enacted satisfactory anti-fireworks laws after 1941, which were in effect in 1946. In spite of a great decrease in the total number of accidents in 1946 as compared with 1941, Kansas, Nebraska, Oklahoma and Wisconsin had materially more accidents in 1946 from fireworks than in 1941. These four states do not have anti-fireworks legislation that is considered satisfactory. The result is a clearcut demonstration that injuries can be prevented by adequate state legislation and that the number of unnecessary accidents rises when such legislation is not in effect. Four other states, Connecticut, Illinois, New York and Texas, recorded approximately the same number of accidents from fireworks in 1946 as in 1941. Of these four states only New York has in effect a model type of anti-fireworks law. With regard to New York, it is noteworthy that 99 of the 106 injuries reported in that state came from New York City, presumably indicating lack of enforcement of the state law within that city."

"The reduction of unnecessary injuries from fireworks depends both on adequate state legislation and on satisfactory enforcement. In 1941 Maryland and New York showed the effects of such policy by an enormous reduction in injuries; in 1946 California, Massachusetts, Oklahoma and Rhode Island showed the same dramatic reduction in accidents. There are few exceptions to the rule that satisfactory control of injuries from fireworks is obtained by those states which enact and enforce statewide laws. The evidence for this is clearly indicated by the fact that in 1939, 7,933 accidents attributable to fireworks were recorded as compared with 903 in 1946, a reduction due almost entirely to the adoption of this policy."

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References

[1]Amer. J. Med. Sci. **211**, 513 (May, 1946).
[2]Ibid. **212**, 179 (August, 1946).
[3]J. Clin. Invest. **24**, 278 (May, 1945).

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References: 1. Dodd, K. and Minot, A. S.: *J. Pediat.*, 8:442, 1936.
2. Dodd, K. and Minot, A. S.: *J. Pediat.*, 8:452, 1936.
3. Sahyun, M.: *Am. J. Dig. Dis.*, 13:59, 1946.

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